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Central Asia: Mapping Future Prospects

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TABLE OF CONTENTS

List of Tables

List of Figures

List of Boxes

LIST OF ABBREVIATIONS

ADB	–	Asian Development Bank
ATC	–	Agreement on Textiles and Clothing
BTC	–	Baku-Tbilisi-Ceyhan
CAREC	–	Central Asia Regional Economic Cooperation
CARs	–	Central Asian Republics
CSB	–	Central and Southeastern Europe Baltics
FDI	–	Foreign direct investment
GDP	–	Gross domestic product
ICT	–	Information and communication technology
MDGs	–	millennium development goals
MFA	–	Multi Fibre Agreement
MVA	–	manufacturing value added
OECD	–	Organization for Economic Co-operation and Development
OEF	–	Oxford Economic Forecasting
OPEC	–	Organization of Petroleum Exporting Countries
PRC	–	People's Republic of China
SEATCs	–	Southeast Asian Transition Countries
TEMECI	–	transition economies manufacturing export competitiveness index
UNCTAD	–	United Nations Conference on Trade and Development
UNDP	–	United Nations Development Programme
UNESCAP	–	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	–	United Nations Educational, Scientific and Cultural Organization
US	–	United States
WEO	–	World Economic Outlook
WTO	–	World Trade Organization
XUAR	–	Xinjiang Uygur Autonomous Region

Foreword

Executive Summary

Outline of Study

Central Asia has emerged as one of the world's fastest growing regions since the late 1990s and has shown notable development potential. This is significant for a region comprising largely of small landlocked economies with no access to the sea for trade. Among the advantages, of the region are its high- priced commodities (oil, gas, cotton and gold), reasonable infrastructure and human capital as legacies of Soviet rule; and a strategic location between Asia and Europe. Furthermore, many Central Asian Republics (CARs) have embarked on market-oriented economic reforms to boost economic performance and private sector competitiveness.

Central Asia: Mapping Future Prospects considers the region's economic prospects to 2015. It charts recent economic performance, highlighting the economic revival. It also synthesizes recent forecasts and constructs scenarios for future economic variables against a constant global background. Projections include, among others, gross domestic product (GDP), manufactured exports per head, GDP per capita and poverty. A special theme chapter develops a manufacturing competitiveness index to compare the CARs with other transition economies and explores the impact of economic reform and supply-side factors (e.g. foreign investment and human capital) on industrial performance

Recent Economic Revival

Following a prolonged period of slow and negative growth, the region (Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) seems to have turned the corner during the last few years and an economic recovery seems under way. Some features include:

- Economic growth (9.9% per year in 2002–2004) has accelerated to historically unprecedented levels.

- Growth has been driven by high commodity prices–particularly oil and natural gas–and buyout demand, increasing inward investment, improved macroeconomic management and infrastructure development.

- There are signs that oil and gas sector-led growth has stimulated the development of services sector (construction and banking) as well as some manufacturing activities.

- The industrial recovery is linked to the performance of manufactured exports which have grown at about 10% per year. Manufactured exports per head in the CARs as a whole rose to $57.1 per head in 2003.

- There are also indications that economic prosperity has been accompanied by job creation and some reduction in poverty to around 41% of total population in the CARs.

- The region's GDP per head rose to $889 in 2004, placing it within the category of the world's low income economies.

- There are signs of a divergence in living standards between oil exporters and non-oil exporters.

Short-term Prospects (2005-2007)

For the next three years, economic growth in the CARs will be in the range of 9% per year. Although inflation will rise somewhat, growth in the oil exporters will continue to be propelled by a combination of high oil and gas prices, buoyant international energy demand, inflow of foreign direct investment (FDI) and investments in modern infrastructure. In the non-oil exporters, growth will be somewhat slower. Favorable prices for non-oil export commodities (e.g. cotton, gold, aluminum and other metals), expansion in the services sector and economic reforms underlie growth in the non-oil exporters. A mild recovery is expected in Kyrgyz Republic fostered by higher gold prices, continuation of a pro-growth economic reform program and higher foreign aid. Increased foreign investment in the natural gas sector in Uzbekistan as well as implementation of measures for private sector development (e.g. stronger legal protection for enterprises and banking sector liberalization) is expected to contribute to growth.

Prospects to 2015

The pressing question facing the CARs is whether the boom that started in the late 1990s will continue until 2015. While this is impossible to predict with certainty, we offer three possible scenarios for the CARs against a constant global background (see Box 1 for details of scenario planning approach used here). The scenarios are distinguished by the extent of action on the domestic policy front in regard to economic policy reform, competitiveness strategy for the industrial sector and regional cooperation.

Scenario 1 - *business as usual* - assumes a moderate policy reform agenda, the relative lack of any industrial competitiveness strategy and intermittent implementation of regional cooperation initiatives. The main results under Scenario 1 are:

- Real GDP growth will be at least 5% in all the CARs during 2005-2015.
- Oil and gas will be the mainstay of future economic development but economic diversification will continue and the manufacturing sector will expand. Manufactured exports per head for the CARs as a group will increase to $126.0 in 2015.
- Poverty will decline to 25.1% of total population in the CARs;
- GDP per capita will rise to $1,871 placing the region on the threshold of today's middle income countries.
- The divergence in living standards between oil and non-oil exporters will grow

In Scenario 2 - *closing the gap* - there is strong commitment to implementing further policy reforms, to developing market-friendly competitiveness strategy and aggressive implementation of regional cooperation initiatives. Scenario 2 suggests the following:

- Real GDP growth in all the CARs will be between 1-2% higher than Scenario 1;
- The pace of economic diversification and manufactured export expansion will be higher than in Scenario 1. The value of manufactured exports per head in Scenario 2 will be about $165.6 compared with $126.2 in Scenario 1.
- Poverty (20.9% of total population in the CARs) will decline more than in Scenario 1 (25.1%);

- GDP per capita will rise further to just under $2,000 placing the region within the ranks of today's middle income countries;
- The disparities in living standards between oil and non-oil exporters will narrow.

Scenario 3 - *falling behind* - assumes a moderate level of internal political instability, some backsliding of the policy reform agenda, a more inward-orientation of policies towards industry and limited regional cooperation.

- GDP growth in all the CARs will be 1-2% less than Scenario 1 and much less than Scenario 2;
- The dependence on the oil and gas sector will grow with little sign of economic diversification. Manufacturing expansion and exports will be limited. For instance, in Scenario 3, manufactured exports per head will reach $89.5 compared with $126.2 in Scenario 1 and $165.6 in Scenario 2.
- The extent of reduction in poverty (to 29.9% will be smaller than Scenarios 2 and 3)
- With a per capita income of about $1,667, the region will be far from the threshold of today's middle income economies.

The analysis suggests that policies are important in determining the future path of development in the CARs and that policy makers face stark choices. If the region continues on its present path (scenario 1 – business as usual) there will some gains but divergences between countries will intensify. If the region decides to follow policies which promote national self interest and rent seeking (Scenario 3 – falling behind) then economic prosperity will be adversely affected. If, on the other hand, the region embraces policy reform, regional cooperation and industrial competitiveness (Scenario 2 – closing the gap) then economic prosperity in all the CARs will be significantly enhanced. For the oil economies, much will depend on how the oil and gas windfalls are harnessed. All countries in the region will gain if these resources are used for the development of individual countries as well as regional cooperation. For the non-oil exporters, the development of manufacturing competitiveness and regional cooperation are key components of a successful strategy.

A cautionary note needs to be added. The projections contained in this study are designed to be only one guide to the direction for economic growth and development in Central Asian economies and of several inputs into the future policy decision framework. There are many internal and external risks that could impact upon the forecasts for the CARs.

Approach to Scenario Planning for the CARs

Forecasting the future of the CARs, particularly a decade ahead, is a daunting task in view of uncertainties in the world economy and the region as well as questions about the reliability of national statistics. Not surprisingly, there have been few previous attempts to do so. Fortunately, future studies and scenario planning is an expanding international field. The world's leading multinational corporations and economies undertake such exercises on a regular basis as an input into business planning and long-term policy development.

In line with this literature, *Central Asia: Mapping Future Prospects* aims to provide a simple "big picture" type of overview of the future economic landscape of the CARs as an aid to national policy making. This study examines the economic revival of the CARs since the late 1990s focusing on economic growth performance, structural change, and poverty reduction. It then considers short-term (2005–2007) economic prospects for the CARs using forecasts made by the Asian Development Bank (ADB) country economists in ADB's annual publication *Asian Development Outlook.* Finally, it constructs indicative scenarios of how the region might evolve in the future and projects key economic variables to 2015. The long-term projections for the CARs rely on a combination of econometric modeling, reduced form estimation, and policy analysis.

The analysis of future prospects for the CARs were based on certain assumptions about the world economy. The world outlook is constructed with the aid of a world econometric model developed by Oxford Economic Forecasting. Our assumptions regarding the global background are as follows. Growth in the world economy over the next decade will depend upon a number of interrelated factors including the price of oil and developments in industrial economies. Our baseline predicts that the world economy will grow at an average annual rate of around 3.2% for the next decade. This is closer to the historical rate of growth in the world economy than the rapid rate of growth of 4% achieved in 2004. In the energy market, adjustments in both supply and demand suggest that prices for oil will retreat from current levels to the range of $40–$45 per barrel over the next decade. Other commodity prices (gold, cotton, aluminum, natural gas) are also expected to be favorable. The People's Republic of China and India will increase their strength as regional economic powers. Both economies are projected to continue their robust economic performance, growing at average rates of close to 8% and 7% respectively over the next decade. The outlook further assumes that there investor confidence will be growing and that FDI flows to developing regions (including the CARs) will increase. This assumption is consistent with a continuation of the agenda of policy reforms that has already begun. Finally, relative political stability will continue in the CARs and throughout the world.

These key variables form the global macroeconomic background for our analysis of future prospects of the CARs. The starting point for the long-term projections for the CARs are the 2005–2007 forecasts from ADB's *Asian Development Outlook.* For 2008–2015, these forecasts were adjusted based on expectations about the intensity of policy reforms, regional cooperation, and industrial competitiveness strategy. Reduced form estimation was used to derive key variables such as GDP growth, manufactured exports for the CARs per capita, GDP per capita, and poverty. Each of the scenarios reflect different expectations of the intensity of policy reforms, regional cooperation, and competitiveness strategy against the constant global background outlined above. Country-level forecasts by the International Monetary Fund and Economist Intelligence Unit were considered in the process of formulating forecasts in the CARs.

A cautionary note needs to be added. The projections contained in this study are designed to be a guide to the direction for economic growth and development in Central Asian economies and only one of several inputs into the future policy decision framework. There are many internal and external risks that could impact upon the forecasts for the CARs.

1. INTRODUCTION

A unique blend of economic, political, and geographical features, which influence its economic development experience, has increasingly focused academic and policy interest on the Central Asian region. Four of these are worth highlighting at the outset. First, the region contains a significant base of the world's natural resources (including oil, natural gas, gold, and other metals) and hence its economic prospects are closely linked to international commodity prices. Second, it is strategically positioned as a gateway between Europe and Asia and offers extensive potential for trade, investment, and growth. Third, the region spans a vast geographical area, with widely differing natural conditions. Many economies are landlocked and have harsh climates, both of which impose large transactions costs on economic activity (Appendix 1). Fourth, all the economies have had a legacy of socialist-oriented economic policies and several have embarked on market-oriented reforms emphasizing macroeconomic stabilization, trade openness, and private sector development.

In the aftermath of transition, the Central Asian Republics (CARs) witnessed a period of prolonged slow and negative growth and a rising incidence of poverty.[1] Many factors have been put forward to explain the difficult transition experience including disruption in production and marketing relations with the former Soviet Union, collapse of aid from the former Soviet Union, a nascent private sector, the lack of capital markets, limited institutions required for a market economy and gaps in infrastructure.

Nevertheless, Central Asia seems to have turned the corner during the last few years. Economic growth, which accelerated to historically unprecedented levels, has been driven by high commodity prices–particularly oil and natural gas–and buyout demand, increasing inward investment, improved macroeconomic management, and development of infrastructure.[2] There are signs that oil and gas sector-led growth has stimulated the development of services sector (construction and banking) as well as some manufacturing activities. There are also indications that economic prosperity has been accompanied by job creation and some reduction in poverty. There is optimism in policy circles in Central Asia, with some even predicting that some of countries of the region will join the ranks of middle income countries within a decade or so.

Against this backdrop, this study reviews recent economic performance of the CARs and analyzes their economic prospects to 2015. It aims to provide a simple "big picture" type overview of the future economic landscape of the CARs as an aid to policy making. Forecasting the future of the CARs, particularly a decade ahead, is a daunting task in view of uncertainties in the world economy and the region as well as questions about the reliability of national statistics. Not surprisingly perhaps there have been few previous attempts to do so.[3] Fortunately, future studies and scenario planning is an expanding international field. Hence, there is a growing

[1] A plethora of literature exists on the economic record and reform experience of Central Asia during the first decade of transition to a market economy. For a selection see: Trushin and Trushin (2000), Pomfret and Anderson (2001), Campos and Coricelli (2002), Svejnar (2002), World Bank (2002), Zhukov (2002), Linn (2004), and Loukoianova and Unigovskaya (2004).

[2] In its first regional economic outlook for the Middle East and Central Asia, the International Monetary Fund (IMF) notes that "A favorable external environment combined with generally sound economic policies to produce strong macroeconomic performance for the countries of the Middle East and Central Asia in 2003 and early 2004. Prospects are for continued strong performance through 2005" (IMF, 2004b, p. 2).

[3] A notable example is Zhukov (2000) who provides economic forecasts for the CARs to 2015. IMF country reports (IMF 2004c, 2004d, and 2005) also make projections for some CARs but mostly to 2010.

body of work on mapping the future of other countries and regions, which provides useful technical insights. [4]

In line with other futures studies, the present study hopes to make a modest contribution to national level scenario planning exercises in the CARs. In particular, it seeks to guide CARs policy makers by suggesting the direction of future economic performance as well as indicating key policy issues. The review of recent economic performance in the CARs looks at macroeconomic developments (GDP growth and structural change, inflation and external developments) and poverty. A theme chapter looks at the industrial performance and competitiveness of the region. Drawing on this analysis, the outlook for the CARs for the next 10 years is projected against a background of global prospects. As long-run forecasts can change in response to external events, the risks to the CARs outlook are also highlighted.

A cautionary note needs to be added to the use and interpretation of the forecasts contained in this study. These projections are designed to be a guide to the direction for economic growth and development in Central Asian economies based on the best information and analysis available at the time of writing. As such they are purely indicative of future trends and one of several inputs to guide policy makers in the region.

The study is laid out as follows:

Chapter 2 deals with recent macroeconomic developments and poverty and income distribution in the CARs. It reviews economic growth and structural transformation, inflation, external sector developments, poverty, and short-term prospects (2005-2007). Chapter 3 maps the future for the CARs to 2015. It draws on the analysis of the previous chapter against a background of regional and global developments. It does so in the form of three scenarios showing alternative outcomes distinguished by domestic policy initiatives in regard to policy reforms, regional cooperation, and industrial competitiveness strategy. Chapter 4 assesses the recent competitiveness record of the industrial sector in the CARs. A simple transition economies manufacturing export competitiveness index is developed to benchmark the CARs performance against other transition economies and key factors influencing competitiveness including economic incentive regime, industrial technology, skills, and infrastructure are examined. Chapter 5 concludes and reviews policy implications for oil and non oil exporting CARs.

This study covers the Central Asia Regional Economic Cooperation (CAREC) members and Turkmenistan with more attention given to the Central Asian Republics. [5] Given the importance of oil and gas resources for Central Asia's economic development, this study draws a distinction between *oil exporters* (Azerbaijan, Kazakhstan, and Turkmenistan) and *non-oil exporters* (the Kyrgyz Republic, Tajikistan, and Uzbekistan). Oil exporters are those CARs that are major exporters of oil and gas to international markets, typically using foreign direct investment to assist resource exploitation. [6] We also review the performance of Mongolia and Xinjiang Uygur Autonomous Region of the Peoples Republic of China (PRC).

[4] These exercises on medium-and long-run forecasting for policy purposes includes ADB (1997), Economic Intelligence Unit (2004), Oxford Economic Forecasting (2004), National Intelligence Council (2004), and PIRA Energy Group (2004).

[5] On the CAREC initiative and ADB's role, see ADB (2004b).

[6] As Appendix 1 shows, Uzbekistan is recognized to have significant natural gas reserves and small oil reserves. However, it has witnessed modest annual gas production growth by avoiding Russia's pipeline system and by concentrating on the domestic market and on exports to its immediate neighbors. Hence, in line with IMF (2004b) and ADB (2004b), this study includes it among the non-oil exporters.

2. CURRENT STATUS OF ECONOMIC DEVELOPMENTS IN THE CARS

2.1. Introduction

This chapter deals with recent developments in the CARs highlighting the turn around in economic performance since the late 1990s. It reviews economic growth and structural change, inflation, external sector developments, and poverty.

2.2. Economic Growth

After a period of dismal economic performance following the breakup of the Soviet Union, the CARs have put together a booming economic performance since 1997 (see Table 2.1).

Table 2.1: GDP Growth (%)

	1992–1996 Average	1997–2001 Average	2002–2004 Average	2002	2003	2004	2005[c]
Oil Exporters							
Azerbaijan	-15.3	9.5[a]	10.6	10.6	11.1	10.2	17.0
Kazakhstan	-7.0	5.2	9.5	9.8	9.2	9.4	9.0
Turkmenistan	-9.3	10.2	21.3	19.8	23.0	21.0	10.0
Non-oil Exporters							
Kyrgyz Republic	-10.6	5.3	4.7	0.0	7.0	7.1	3.0
Tajikistan	-15.2	5.9	10.1	9.5	10.2	10.6	8.0
Uzbekistan	-3.4	4.4	5.2	4.0	4.1	7.7	5.0
CARs[b]	-8.0	6.1	9.9	9.3	10.0	10.4	9.2

Source: 1992–1996 from EBRD (2004) and 1997–2005 from the Asian Development Bank (ADB) ADO 2005, ADB 2005 Update
[a] 1999-2001.
[b] Weighted average, GDP weights.
[c] Staff estimates.

From 1997 to 2001, annual GDP grew by 6.1% per year in Central Asia as a whole compared with negative growth (-8.0) in the previous five years. In the next 3 years, growth rebounded to a spectacular 9.9%. Although from a low base, the region's performance is the highest in the post-transition period for any group of countries in the Soviet sphere and compares favorably with the fastest- growing economies in Asia and the rest of the developing world.[7] In 2005, the region's growth is expected to be well over 9%, reflecting high commodity prices, buoyant international demand and other country-specific factors discussed below.

High energy prices and investments in the oil and gas sector, including petrochemicals, were the main growth drivers in the three oil exporting economies of Azerbaijan, Kazakhstan, and Turkmenistan. In Azerbaijan, oilfield and pipeline investment, natural gas development, and a booming construction sector have contributed to a strong growth environment. GDP growth accelerated from 9.5% in 1997-2001 to 10.6% in 2002–2004. Accelerating economic growth in Kazakhstan (9% since 2002) is associated with oil and natural gas investments, good macroeconomic management, and investments in infrastructure. In addition, economic

[7] According to European Bank for Reconstruction and Development (2004), real GDP growth in all transition economies as a group was only 0.4% per year during 1992–2003. World Bank (2005) shows that high performing East Asian economies grew at 7.2% during 1990-2003, South Asian economies at 5.5%, Latin American and Caribbean economies at 2.7% and African economies at 2.7%.

diversification has begun recently as food processing, machinery, oil refining, and chemicals showed strong growth. Turkmenistan's high growth rate in 2002–2004 is based on official figures.[8] The country is the weakest reformer in Central Asia but has benefited from natural gas exports, a construction boom, and foreign investment from Turkey in the textiles sector.

Among the non-oil economies, growth in Kyrgyz Republic averaged around 5% beginning in 2002–2004 and 7% in 2003 and 2004 due to a buoyant minerals sector led by gold exports and a rebound in the agricultural sector. Uzbekistan's economy grew steadily at just over 5% as agricultural production benefited from restructuring and privatization, as well as from favorable cotton prices. In Tajikistan, the end of civil war aluminum exports, remittances from migrant workers, and foreign aid served as the main impetus for expansion as GDP growth averaged about 10.1% during 2002–2004.

Table 2.2: GDP Per Capita (US$)

	1997–2001 Average	2002	2003	2004	2004 PPP$
Oil Exporters					
Azerbaijan	600.0	763	865	1,029.4	4,174.63
Kazakhstan	1,345.3	1,659	1,995	2,723.9	7,493.97
Turkmenistan	604.7	961	1,236	1,250.7	7,021.03
Non-oil Exporters					
Kyrgyz Republic	312.1	320	344	432.4	1,928.46
Tajikistan	180.8	190	207	323.1	1,193.31
Uzbekistan	592.2	383	389	461.2	1,870.96
CARs	**606**	**713**	**389**	**889**	**3947**

Source: World Bank World Development Indicators Online.
[a] 1998–2001

Per capita income in Central Asia has also grown as population growth has been low (see Table 2.2). By 2004, the region's per capita income (US$) increased to $889 (up from $606 in 1997–2001). Despite these recent gains in income growth, per capita income in the CARs remains low by international standards as they are categorized as low income countries (except Kazakhstan, which is a middle income country. The three oil exporting countries have significantly higher per capita incomes than the non-oil exporters indicating a divergence in prosperity within the region. This divergence between oil exporters and non-oil exporters is also visible in figures for per capita income in PPP$ (Table 2.2). Furthermore, several CARs have surpassed pre-crisis 1991 levels of per capita income which is creditable.[9]

2.3. Structural Change

This boom has been driven primary by developments in the oil and gas sector. There have also been by structural changes in the economies resulting in a shift toward production of industrial goods and minerals and away from agriculture (see Table 2.3). While oil and gas continue to drive the industrial sector (Appendix 1), the rest of the industrial sector and manufacturing also grew rapidly. The share of industry in GDP and manufacturing value added increased. For example, manufacturing value-added increased by over 25% per year in Azerbaijan and 10% per year in Kazakhstan between 1998 and 2003. Manufacturing value-

[8] IMF (2004e) constructs alternative GDP estimates for 2001–2003 suggesting that official GDP estimates are overstated. The official GDP estimate for 2001–2003 is 19.0% compared with an IMF alternative estimate of around 11%.
[9] See United Nations Human Development Report (2005) for details.

added per capita also increased. By 2003 Kazakhstan had the largest industrial base while the Kyrgyz Republic had the smallest. The remaining CARs fall in between these extremes.

Table 2.3 Sector Shares of Agriculture, Industry and Services Sector 1997 and 2003 (% of GDP)

	Agriculture		Industry (b)		Services	
	1997	2003	1997	2003	1997	2003
Oil Exporters						
Azerbaijan	21.7	14.1	39.9	53.7	38.3	32.8
Kazakhstan	13.4	7.3	30.5	35.1	51.6	57
Turkmenistan	20	(a) 22.5	44.3	(a) 42.4	35.7	(a) 35.1
Non-Oil Exporters						
Kyrgyz	49.8	50.9	25	17.2	25.2	31.9
Tajikistan	31.8	(a) 24.3	25.6	(a) 24	42.6	(a) 51.7
Uzbekistan	21.3	28.6	18	15.8	60.7	41.9

Notes: (a) 2002 (b) Mining, manufacturing, construction, and utilities
Source: ADB, ADO 1998 and 2005; ADB Key Indicators 2002 and 2004

The recent industrial recovery in the CARs is closely linked to the performance of manufactured exports that grew about 10% per year for the region a while between 1998 and 2003 (for more details see Chapter 4). Both oil and non-oil exporters had respectable manufactured export growth although the former (11.0%) was somewhat higher than the latter (7.8%). The structure of manufacturing and manufactured exports varies from country to country. Textiles and garments comprise over 80% of manufactured exports in Tajikistan and Turkmenistan (driven in part by foreign investors from Turkey and Korea) and about 37% of the Kyrgyz Republic's manufactured exports. Meanwhile, Kazakhstan's manufactured exports are dominated by iron and steel with some focus on chemicals and plastics as well as machinery and transport equipment. Azerbaijan also has a mix of iron and steel, chemicals, and machinery.

The industrial recovery is also linked to the reforms that have been taking place in the region. Price liberalization has been widespread along with privatization of small and medium scale industries. Privatization of large scale industry, competition policy and reforms in banking finance have proceeded at a more moderate pace. (Refer to Appendix 7 and Table A7.1 for further details)

2.4. Inflation

Macroeconomic stability, proxied by inflation, has also improved**.** Inflation rates have fallen significantly throughout the region over the past few years indicating improved macroeconomic stability (see Table 2.4). Average inflation for the CARs as a group declined from 20.4% to 6.9% between 1997–2001 and 2002–2004. Furthermore, both oil exporters and non oil exporters were typically able to contain inflation at lower levels in 2002–2004 than in 1997–2001. This may be partly the result of greater fiscal and monetary discipline as well as greater stability in the exchange rate and moderate inflation worldwide. The Kyrgyz Republic had the lowest inflation among the CARs with 3% in 2002–2004 while Tajikistan, with double-digit inflation, had the highest. In 2005, inflation in the CARs is expected to moderately rise to 7.4% as strong demand driven by oil export income exerts upward pressure on prices.

Table 2.4: Inflation (%)

	1997–2001 Average	2002–2004 Average	2002	2003	2004	2005[b]
Oil Exporters						
Azerbaijan	-0.5	3.9	2.8	2.2	6.7	10.0
Kazakhstan	10.9	6.5	5.9	6.6	6.9	7.2
Turkmenistan	15.0[a]	6.8	8.8	6.5	5.0	7.0
Non-oil Exporters						
Kyrgyz Republic	19.1	3.0	2.0	3.0	4.0	4.6
Tajikistan	46.0	11.2	10.2	16.4	7.1	5.9
Uzbekistan	32.1	9.7	21.6	3.8	3.7	7.0
CARs	20.4	6.9	9.0	5.6	6.0	7.4

Source: ADB ADO 2005, ADB ADO 2005 Update
[a] 1998-2001
[b] Estimate

2.5. External Sector Developments

External sector performance has generally improved compared with the past as exports have grown more rapidly. This improved trade performance, particularly since 1997, has been driven by developments in the minerals and metals sector in oil exporting countries and by prices for gold and cotton in the non-oil exporting economies.[10] In addition, as Section 2.3 discussed, manufacturing has also been buoyant and the overall performance has improved from a decade ago. Between 1997 and 2004, overall export growth from the oil exporting CARs was strong, averaging about 18% per year (see Table 2.5). For the non-oil exporting countries in the region, export performance accelerated after 2001. By 2004, export growth in Kyrgyz Republic, Tajikistan, and Uzbekistan averaged over 20%. In the Kyrgyz Republic, export growth has fluctuated from negative to strong growth, primarily because of movements in gold prices and exports of gold and petroleum products. In Tajikistan, exports of cotton and aluminum steadily increased as the economy continues to recover. In Uzbekistan, export growth picked up strongly in 2003 and 2004 on the back of higher prices for gold and cotton.

Weakness in the US dollar has resulted in deteriorating terms of trade for the CARs. Nevertheless, strong export earnings facilitated import growth, primarily of consumer goods and fueled economic growth and investment in goods related to major oil and natural gas. In this connection, import growth was particularly strong in the oil exporting economies. The lumpiness and timing of these investments created some mismatches between import demand and the foreign exchange earnings required to finance them. Despite this lack of synchronization import finance has not been a problem due to capital inflows, which financed some oil and natural gas investments, and the buoyancy of exports.

[10] See Freinkman *et al.* (2004) for an analysis of trade performance of the CARs as well as other CIS economies.

Table 2.5: Merchandise Export Growth (%)

	1997–2001 Average	2002	2003	2004	Value of Exports 2004 $ Millions	Value of Manufactured Exports 2003 $ Millions
Oil Exporters						
Azerbaijan	25.4	12.7	13.9	31.5	3,452	134.4
Kazakhstan	9.6	12.3	31.6	53.7	20,291	2117
Turkmenistan	27.9	9.0	10.7	9.0	3,444	225
Non-oil Exporters						
Kyrgyz Republic	-1.1	3.7	18.5	23.8	731	193.1
Tajikistan	-1.9	7.3	14.3	15.4	922	250.1
Uzbekistan	-6.4	-8.4	29.1	22.3	3,961	785
CARs	8.9	8.2	25.0	38.9	32,801	3,704.6

Source: ADB ADO 2005 and Table 4.1.

The trade balance for the oil exporting CARs has been positive for the past few years primarily because of the strong trade surplus of Kazakhstan and, to a lesser extent, Turkmenistan (Appendix 2). Aside from Uzbekistan that accumulated a small trade surplus, the non-oil exporting countries of the region had small deficits on their trade accounts. On the capital account, oil exporting countries accumulated large deficits in some years as they made substantial investments in gold, oil, and natural gas projects. The non-oil exporting countries accumulated somewhat smaller current account deficits

Despite large foreign-funded investments in the minerals sector, the current account deficit for the region as a percent of GDP was still within acceptable limits at around 3% of GDP in 2003. Inflows of foreign direct investment (FDI) generally offset the current account deficit in most cases leaving the overall balance either in surplus or small deficit.

The boom has increased government revenue and has helped fiscal performance and reduced reliance on external borrowing. As a result, the total debt for the CARs has typically fallen as a percent of GDP. In 2004 the total debt of the region (aside from Kazakhstan) was just over $8 billion; it has not increased substantially since the late 1990s and has fallen relative to the late 1980s (Appendix 2).

There are also signs that foreign investors are beginning to take greater interest in the CARs. This is reflected by strong inflows into the oil-rich exporters. (Refer to Appendix 2). This is a classic example of natural resource seeking FDI (mainly from the United States, European Union (EU), and Russia) and has brought with it capital, foreign technology, and western management expertise to facilitate the efficient development of oil and gas exports. Most of Central Asia's FDI since the mid-1990s has gone to Kazakhstan. Such FDI is concentrated in the oil and gas industry but has gradually spilt over into electricity, metals, manufacturing and banking. In the last 2 years, however, FDI flows to Azerbaijan dramatically increased to the extent that by 2003, FDI of $2.3 billion slightly exceeded that in Kazakhstan ($2.2 billion).

It is striking that FDI in the three non-oil exporting CARs is negligible, amounting to only $107.5 million in 2003. A lack of natural resources, high transactions costs due to landlocked terrains, vast distance from markets, and perceived political risk are among the explanations for limited FDI in non-oil exporting CARs.

2.6. Poverty

There seems a general consensus that between 1991 and 1995, poverty in the CARs increased. As ADB (2004b, 12) notes: "the major cause of poverty was the transition shock that resulted in large-scale loss of employment, income, and purchasing power in all CARs." Underlying factors included the breakdown of Council for Mutual Economic Assistance production and distribution network, the collapse of the social security system, higher inflation caused by disruption in production of key goods and loss of control over the money supply, civil strife in several countries and migration of skilled Russians.

Although the data is very sketchy and there are issues of data consistency and reliability, national poverty line estimates suggest a decline in poverty in all CARs where data are available (see Table 2.6). Nevertheless the pace of decline has been slow and poverty remains quite high at about 40% of total population in the CARs as a group.[11] Lower inflation rates, stronger growth, creation of new external trade linkages and restoration of social and political stability have been contributing factors to the decline in poverty in the CARs.

Table 2.6: Poverty and Income Distribution

	National Poverty Incidence (Population below poverty line, %)		GINI Index	Share of bottom 20% of income recipients
	Earliest	Latest		
Oil Exporters				
Azerbaijan	68.1 (1995)	49.6 (2001)	36.5 (2001)	7.5
Kazakhstan	34.6 (1996)	27.9 (2002)	31.3 (2001)	8.2
Turkmenistan	—	29.9 (1998)	40.8 (1998)	6.1
Non-oil Exporters				
Kyrgyz Republic	51.0 (1997)	47.6 (2001)	29.0 (2001)	9.1
Tajikistan	—	56.6 (2003)	34.7 (1998)	8.0
Uzbekistan	—	27.5 (2000)	26.8 (2000)	9.2
CARs		39.9	33.2	8.0
Others				
Thailand	13.1 (1992)	9.8 (2002)	43.2 (2000)	6.1
Malaysia	—	7.5 (1999)	49.2 (1997)	4.7
Indonesia	15.7 (1996)	18.2 (2002)	34.3 (2002)	8.4
Mongolia	36.3 (1995)	33.1 (1995)	44.0 (1998)	—

Source: ADB (2004a), World Bank (2005).
— = not available.

The latest estimates of national poverty lines show the following:

- Poverty is generally higher in the non-oil exporters than the oil exporters.
- With poverty incidence in excess of 50%, Tajikistan is the poorest CAR.

[11] On the broader issue of achieving the Millennium Development Goals (MDGs), the CARs have made progress but there is an unfinished agenda. To quote an authoritative study: "…the countries of greatest concern are Tajikistan, Uzbekistan, Kazakhstan, and Armenia. The first two have high and increasing rates of malnutrition. Education standards have also slipped and the virtual collapse of the social sector in some countries has resulted in a general deterioration of health indicators" (UNESCAP-UNDP-ADB 2005), p. 3. The study calls for a reshaping of national and local institutions involved in service delivery to achieve the MDGs. Key issues include making services available, improving quality, reducing barriers to accessing services and broadening the range of providers.

- Azerbaijan (an oil exporter) and Kyrgyz Republic seem to have high poverty incidence in excess of 45%.
- In Kazakhstan, poverty levels are somewhat lower at around 28%, having come down from over 40% in the late 1990s.
- Uzbekistan and Turkmenistan (an oil exporter) also appear to have low poverty levels.

Rural poverty seems to be a significant problem in some CARs as the sector has absorbed many urban unemployed. Income disparities and poverty are more pronounced in some sub–regions (e.g. the Ferghana Valley and border regions of Kazakhstan, the Kyrgyz Republic, and Tajikistan). Despite these regional inequalities, overall income distribution figures suggest that income is reasonably equality distributed in the CARs with an average Gini coefficient of 33.2%. Furthermore, the share of the poorest 20% of the population at 8% is higher when compared with countries in Southeast Asia such as Thailand and Malaysia (see Table 2.5).

2.7 Short-Term Prospects (2005–2007)

The short-term prospects for the CARs seem bright indicating a continuation of the economic revival of recent years. According to the ADB's *Asian Development Outlook 2005 Update, f*or the next 3 years, economic growth in the CARs will be in the range of 9% per year. The highest growth rates in 2005–2007 are likely to be visible in the oil-rich economies (see Tables 2.1 and 3.2).

Accordingly, Azerbaijan is projected to grow at 18.5%, Kazakhstan at 8.2%, and Turkmenistan at 7.8%. Although inflation will rise somewhat, growth in the oil exporters will continue to be propelled by a combination of high oil and gas prices, buoyant international energy demand, inflow of FDI, and investments in modern infrastructure. In the non-oil exporters, growth will be somewhat slower.

Growth in the non-oil economies is projected to be in the range of 4.5% to 6.9% (see Table 3.2).[12] Favorable prices for non-oil export commodities (e.g. cotton, gold, aluminum, and other metals), expansion in the services sector, and economic reforms underlie growth in the non-oil exporters. A mild recovery is expected in the Kyrgyz Republic fostered by higher gold prices, continuation of a pro-growth economic reform program, and higher foreign aid. Increased foreign investment in the natural gas sector in Uzbekistan as well as implementation of measures for private sector development (e.g. stronger legal protection for enterprises and banking sector liberalization) is expected to contribute to growth.

[12] Our estimates for 2005–2007 are of similar magnitude to IMF estimates for 2005–2007 which were 7% for Kazakhstan, 5.5% for Kyrgyz Republic, and 7% for Tajikistan. See IMF (2005c, 2005d, and 2005e).

3. MAPPING THE FUTURE: 2015

3.1. Introduction

The pressing question facing the CARs is whether the boom that started in the late 1990s will continue beyond the next three years. While this is impossible to predict with certainty, we offer three possible scenarios for the CARs against a global background (see Box 3.1 and Appendix 3 for further details regarding the global background and forecasting method). The indicative scenarios are distinguished by the extent of action on the domestic policy front in regard to economic policy reform, competitiveness strategy and regional cooperation.

- Scenario 1 - *business as usual* - is assumes a moderate policy reform agenda, the relative lack of any competitiveness strategy and intermittent implementation of regional cooperation initiatives.
- In Scenario 2 - *closing the gap* - there is strong commitment to implementing further policy reforms, to developing market-friendly competitiveness strategy and aggressive implementation of regional cooperation initiatives.
- Scenario 3 - *falling behind* - assumes a moderate level of internal political instability, some backsliding of the policy reform agenda, a more inward-orientation of policies towards industry and limited regional cooperation.

The remainder of this chapter discusses each of these scenarios. The final section outlines some of the risks to the forecasts. To relate the forecasts to recent developments, Table 3.1 provides a summary of current performance of the CARs.

Table 3.1. A Summary of Current Performance

	Real GDP Growth 1997–2004 (% p.a.)	Manufactured Exports per head 2003 ($)	GDP per Capita 2004 ($)	Poverty Incidence (population below national poverty line, %), latest
Oil Exporters				
Azerbaijan	10.0(a)	16.4	1,029	49.6(b)
Kazakhstan	6.8	142.1	2,724	27.9(c)
Turkmenistan	14.3	46.9	1,251	29.9(d)
Non-oil Exporters				
Kyrgyz Republic	5.1	38.2	432	47.6(b)
Tajikistan	7.4	39.7	323	56.6(e)
Uzbekistan	4.7	30.7	461	27.5(f)
All CARs		57. 1	889	39.9

Notes: (a) 1999–2004, (b) 2001, (c) 2002, (d) 1998, (e) 2003, (f) 2000
Sources: Estimated from ADB Asian Development Outlook and World Bank World Development Indicators

Box 3.1: Global Background

Our assumptions regarding the global background are as follows. Growth in the world economy over the next decade will depend upon a number of interrelated factors including the price of oil and developments in industrial economies. Our baseline predicts that the world economy will grow at an average annual rate of around 3.2 percent for the next decade. This is closer to the historical rate of growth in the world economy than the rapid rate of growth of 4 percent achieved in 2004. In the energy market adjustments in both supply and demand suggest that prices for oil will retreat from current levels to the range of $40 – $45 per barrel over the next decade. Other commodity prices (gold, cotton, aluminum, natural gas) are also expected to be favorable. PRC and India will increase their strength as regional economic powers. Both economies are projected to continue their robust economic performance, growing at average rates of close to 8 percent and 7 percent respectively over the next decade. The outlook further assumes that there will be growing investor confidence and that FDI flows to developing regions (including the CARs) will increase. This assumption is consistent with a continuation of the agenda of policy reforms that has already begun. Finally, relative political stability will continue in the CARs and throughout the world.

3.2. Scenario 1 – Business as Usual

Economic policy reform will continue in both oil and non-oil exporters at a moderate pace. This means that there will be changes in some areas but gaps in others. In the oil economies, this means that reform of trade relations with the rest of the world and the World Trade Organization (WTO) membership will proceed over time. Small scale privatization will also be gradually implemented while large scale privatization and corporate governance will make less progress. Financial sector liberalization and development will lag. In the non-oil economies, variable progress will be made in trade reform and price liberalization but financial sector liberalization and competition policy will lag.

Regional cooperation initiatives in transport, trade and energy will be implemented intermittently. In the area of transport, harmonization of transport regulations and cross-border trade will continue gradually while the development of a modern railway system and integration of the road network will proceed albeit at a moderate pace. In trade facilitation, improvements will be visible in customs codes and clearance over time but less progress will be observed in implementing best practice trade facilitation such as a uniform information system and single window inspection. Residual non-tariff measures (e.g. technical barriers to trade and sanitary and phytosanitary measures) on intra-regional trade will remain. In the energy sector, structural reform to unbundled components of the power sector (e.g. transmission generation and distribution) will be slow. Tariff reform including transfer pricing issues including shadow pricing of water will be constrained by political factors. Rehabilitation of regional energy infrastructure particularly cross-border lines will take place on a bilateral basis.

Competitiveness policies will be generally under-emphasized.

The details of the forecast are presented in remainder of this section.

3.2.1. Growth

GDP growth in the region is likely to be robust, exceeding 5% per year in all the CARs in 2005–2015. Within the CARs, there will be increased divergence in economic performance as the three oil- rich economies will grow more rapidly than the non-oil economies. Azerbaijan is expected to grow the fastest at around 10% annually and Uzbekistan the slowest (about 5% per year). In between these, Kazakhstan is likely to grow at 7.1%; Tajikistan 6.0%, Turkmenistan 5.6%, and Kyrgyz Republic 5.6% (see Table 3.2). These long-range forecasts and the theme of

divergence between oil and non-oil exporters are consistent with those of the IMF.[13] This is a strong performance for developing countries in general and even by comparison with Asian transition economies such as Viet Nam, Cambodia, and Laos. There will be significant potential for structural changes and a number of opportunities for trade and international investment in manufacturing and in the booming oil and gas industry.

Table 3.2: Scenario 1 Real GDP Baseline Growth Forecasts to 2015 (%)

Country	2005–2015	2005–2007
Oil Exporters		
Azerbaijan	10.3	18.5
Kazakhstan	7.1	8.2
Turkmenistan	5.6	7.8
Non-Oil Exporters		
Kyrgyz Republic	5.6	4.5
Tajikistan	6.0	6.9
Uzbekistan	5.2	5.8

Source: ADB ADO 2005 for estimates from 2005–2007. Staff estimates for remainder of forecast period.

The total population in the CARs will be around 75 million by 2015 (see Table 3.3), which is about 10 million more than in 2004. Uzbekistan (with 28.1 million people) will remain the most populous country in Central Asia, followed some way behind by Kazakhstan (with 18.1 million) and Azerbaijan (9.7 million). Population growth in the CARs is likely to be quite slow during 2003–2015. During the Soviet era, family planning birth control and abortion were used to maintain a modest rate of population growth. These practices have continued. Combined with an aging population and some out-migration of younger people, birth rates and population growth remain low. Population projections vary from 1 percent growth in non oil exporters to between 1.5 percent and 2.3 percent in oil exporters. This compares with higher rates of around 2% for many other low-and medium-income developing countries[14]. These demographic trends highlight several economic implications for the CARs. On the one hand, growth in incomes can be more effectively translated into higher per capita income. On the other hand, domestic markets may grow slowly in the future, reflecting a small base of consumers and producers. Regional cooperation and multilateral liberalization offer opportunities to access more dynamic markets. There may also be skills shortages as the demand for skilled manpower in key industries exceeds limited supplies, already exacerbated by outward migration. This could lead to calls for liberalization of labor markets to attract adequate supplies of skilled labor. Furthermore, as the population ages, more attention needs to be paid to social security provision.

[13] Under Scenario 1, our simple average GDP growth forecasts (2005–2015) for oil and non-oil exporters are about 8.2% and 5.7%, respectively. This confirms the trends in ADB (2004b) which projected real GDP growth of 8.1% per year in oil rich CARs and 4.1% per year in non-oil CARs during 2002–2015. Our annual average GDP growth forecasts for Kazakhstan (7.8%) and Tajikistan (6.5%) for 2005-2010 are also in the same range as the International Monetary Fund (IMF's) medium-term projections (2005–2010) which were 7.5% for Kazakhstan and 5.6% for Tajikistan. However, our forecast for Azerbaijan (14.3%) for 2005–2010 is lower than the IMF figure of 21.8%. The difference in the case of Azerbaijan reflects different assumptions about the impact of the oil sector on overall economic growth. For details of IMF forecasts, see IMF (2004c, 2004d and 2005).

[14] In ADB (1997), Table 3.4, p.154, the growth rate of the active population for other Asian regions is projected to be around 2.9% in Southeast Asia and South Asia between 1995 and 2025.

Table 3.3: Population Forecast to 2015[a]
(in millions)

Country	2004	2015
Oil Exporters		
Azerbaijan	8.2	9.7
Kazakhstan	14.9	18.1
Turkmenistan	4.9	6.3
Non-Oil Exporters		
Kyrgyz Republic	5.0	5.6
Tajikistan	6.3	7.0
Uzbekistan	25.6	28.1
Total	64.9	74.8

Source: World Bank, World Development Indicators Online for historic data and staff estimates for forecasts.
[a] Population projection is based on trend line estimate of population growth. Kazakhstan's population estimate for 2015 was adjusted upward to reflect expected inward migration.

Average per capita income for the CARs of $1,871 in 2015 will place the region within the ranks of today's middle-income economies (see Table 3.4).[15] However, there will be significant variation within the region with the oil-rich economies, led by Kazakhstan, having per capita incomes nearly six times higher than those of the non-oil economies. With a per capita income of $4,807 by 2015, Kazakhstan will approach the status of an upper middle-income country. For the other two oil-rich economies, per capita income will be comparable to the current per capita income of Russia and Thailand. Tajikistan (per capita income of $552) will remain the poorest CAR and be among the ranks of the today's low income countries ($450 per head). With around $700 per head, the Kyrgyz Republic and Uzbekistan will be somewhat higher and will have graduated out of the category of low income countries. Nevertheless, they will remain relatively poor countries in terms of per capita income levels. These forecasts highlight the impact of successful exploitation of oil and gas resources and indicate that divergence in the economic prosperity between oil and non-oil rich economies will increase. They also underline the likely emergence of Kazakhstan as a regional growth pole with the potential to drive expanded trade and investment relationships with other CARs[16]. Kazakhstan and the two oil-rich economies will also increasingly become a magnet for labor migration from poorer CARs. For the non oil economies of Tajikistan, Uzbekistan and the Kyrgyz Republic, there will be a continued need for external assistance to raise incomes and reduce the impact of poverty.

[15] Zhukov (2000), p. 254, says that to restore income to 1990 levels, the CARs will have to grow at between 4.5 and 5% per year until 2015.
[16] ADB (1997) projects much higher growth between 1995 and 2025 under an open economy policy regime. For example, per capita income growth in Southeast Asia is 5.1% versus 2.9% in an open economy policy regime versus a closed policy regime.

Table 3.4: Scenario 1 GDP Per Capita Forecast to 2015 (US$)

Country	2004	2015
Oil Exporters		
Azerbaijan	1029	2602
Kazakhstan	2724	4807
Turkmenistan	1251	1790
Non-Oil Exporters		
Kyrgyz Republic	432	739
Tajikistan	323	552
Uzbekistan	461	733
Total	889	1871

Source: Table A1.1 for historic data and staff estimates based on GDP and population forecasts in previous tables.

3.2.2. Structural change

Structural changes will occur as a result of increased exploitation of the mineral resource base and the process of industrialization that is projected to continue. By 2015, total oil and gas exports from the oil-rich CARs will amount to about $32 billion, a nearly threefold increase from export value of about $12 billion today.[17] Oil and gas exports will continue to be the main drivers of economic growth and dynamism in the three oil-rich economies (see Table 3.5). Proven reserves of oil and natural gas should be sufficient to maintain current and projected future rates of extraction for between 25 and 60 years in the three oil exporting economies. Growth in oil and gas exports will be strongest in Azerbaijan, following the opening of the Baku-Tbilisi-Ceyhan (BTC) pipeline to Turkey. This pipeline opens up the European oil market to Azerbaijan and potentially also to Kazakhstan. The BTC pipeline will provide an alternative oil shipment route to Europe avoiding the high transit charges levied by the Russian Federation. Oil sector growth will slow somewhat in the medium term as prices for oil and gas stabilize at around $40-45 per barrel and output growth slows as existing pipeline capacity is more fully utilized. Nevertheless, the oil and gas sector will grow faster than GDP in all oil exporting countries.

Table 3.5: Scenario 1 Oil and Gas Exports—Projection to 2015 (in billion US$)

Country	2003	2015
Azerbaijan	2.25	6.40
Kazakhstan	7.02	21.19
Turkmenistan	2.94	4.74
Total	12.21	32.33

Source: IMF (2004c), IMF (2004e), and IMF (2005a) for historic data. Staff estimates for forecasts.

Economic diversification will continue at a more rapid pace through the expansion of manufactured exports (see Table 3.6). Total manufactured exports will nearly treble by 2015 to about $9.4 billion.[18] This is equivalent to about one third the value of oil and gas exports of the region. The region's manufactured export base will continue to be dominated by Kazakhstan ($4.8 billion) and Uzbekistan ($2.5 billion). Kazakhstan will continue to have the highest

[17] These projections were based on forecasts of oil prices, production capacity, proven reserves, and anticipated developments in transportation (e.g. pipelines).

[18] The projections for manufactured exports and manufactured exports per head in 2015 were derived using historical estimates of elasticities of manufactured exports with respect to GDP growth. The non-oil economies typically have a higher elasticity owing to their comparative advantage in labor-intensive manufacturing production along with lower factor costs.

manufactured exports per head. Turkmenistan comes next. Azerbaijan remains the smallest exporter in terms of manufactured exports per head. Capital-intensive petroleum products like plastics and petrochemicals, metal products, engineering goods, and some textiles and garments are likely to underlie this manufactured export growth. There is also likely to be diversification of export markets away from Russia as demand from the PRC and India grow rapidly. Industrialization and structural change will result in a wider variety of products being produced for regional and international markets, help boost per capita income, and result in job creation.

Table 3.6: Scenario 1 Manufactured Exports—Projection to 2015

Country	Manufactured Exports 2003 (mn$)	Manufactured Exports 2015 (mn$)	Manufactured Exports per head ($) 2015[a]
Oil Exporters			
Azerbaijan	134.4	345	37.4
Kazakhstan	2,117.0	4,822	299.5
Turkmenistan	225.0	831	136.2
Non-Oil Exporters			
Kyrgyz Republic	193.1	333	57.4
Tajikistan	250.1	589	83.0
Uzbekistan	785.0	2,518	82.3
Total	3,704.6	9,437	126.0

Source: Table 4.1 for historic data and staff estimates for forecasts.
[a] Manufactured exports in 2015 based on projections using most recent exports estimates and staff estimates of elasticities of manufactured export growth with respect to GDP growth.

3.2.3. External Sector

The external sector projections focus on the three non-oil exporting countries (the Kyrgyz Republic, Tajikistan, and Uzbekistan). This is because the external sector accounts for the three oil-producing countries are dominated by oil and gas. As a result, these countries have high enough incomes and sufficient foreign direct investment to go to capital markets for additional resources. They are not potential borrowers from the multilateral institutions as their financing gaps, if any, can be met by private sector borrowing. The current account deficit is projected to increase in the Kyrgyz Republic and Tajikistan. These current account deficits will be modest in size, ranging from $200 million per year in the Kyrgyz Republic to $70 million in Tajikistan for the period 2011–2015. This is because imports demand growth to meet various infrastructure and manufacturing project requirements as well as for some consumer goods is projected to be somewhat stronger than the expansion of exports proceeds (see Table 3.6). Growth in the current account deficit will be constrained by already high levels of external debt and limited sources of finance for the Kyrgyz Republic and Tajikistan. In Uzbekistan, the current account balance is projected to remain in surplus over the forecast period as a result of stronger export growth to the Chinese market and continued slow growth in imports. Structural factors and a restrictive policy environment that discourages trade liberalization will also inhibit more rapid import growth.

Table 3.7: Scenario 1 External Accounts—Projections to 2015

Indicators	Kyrgyz Republic			Tajikistan			Uzbekistan		
	Balance of Payments	Projections		Balance of Payments	Projections		Balance of Payments	Projections	
	2000–2004	2005–2010	2011–2015	2002–2004	2005–2010	2011–2015	2001–2004	2005–2008	2011–2015
Current account balance ($mn)	-45.8	-108.3	-200.0	-29.3	-55.7	-70.0	432.8	558.8	400.0
Foreign Direct Investment (net) ($mn)	31.8	60.0	125.0	29.3	48.3	75.0	73.4	87.5	120.0
Financing gap (-) ($mn)	0.0	-60.5	75.0	0.0	1.1	33.0	-152.4	-48.0	80.0
Total outstanding debt as % of GDP	75.4	54.7	45.0	69.3	53.9	40.0	40.0	29.5	22.0

Source: IMF estimates and staff estimates.

FDI is expected to rise slowly as the external policy environment improves in the Kyrgyz Republic and (to a lesser extent) in Tajikistan (see Table 3.7). Annual FDI inflows of $125 million in the Kyrgyz Republic and $75 million in Tajikistan, while modest in size by international standards, will help to offset the rising current account deficit and should contribute to growth technology transfer and productivity gains in industry. In spite of slower reforming policy environment, Uzbekistan is expected to keep inflows of FDI growth to around $120 million per year. This is in large part due to foreign direct investment in the country's natural gas sector.

Total outstanding debt as a percent of GDP is expected to decline slowly in the Kyrgyz Republic and Tajikistan and more rapidly in Uzbekistan (see Table 3.7). The drivers for debt reduction are increased inflows of FDI in all three non-oil economies, debt restructuring in the Kyrgyz Republic and possibly Tajikistan, remittances in Tajikistan, and the use of some trade and current account surplus to reduce external debt in Uzbekistan.

3.2.4. Poverty

Rapid growth in income will facilitate a sustained reduction in poverty in the CARs over the forecast period. As a whole, the incidence of poverty will fall from 40% today to about 25.1% in 2015 (see Table 3.8). This means that around 11 million more people will be taken out of poverty as a result of strong economic performance. While still high, this rate of poverty is around the current level of poverty in Poland today and slightly less than the current rate of poverty in the Russian Federation. Non-oil economies will be relatively more responsive to changes of income than oil exporters due to elasticity effects. [19] The poorest countries in 2015 will remain Tajikistan, Kyrgyz Republic, and Azerbaijan (with about a third of their population

[19] A crucial aspect of the poverty projection for 2015 was the elasticity of poverty reduction with respect to GDP growth. The reported poverty estimates are somewhat conservative considering the development experience of other Asian economies. Oil exporting countries were assumed to have lower poverty elasticities due to the capital intensity of oil sector and industrial production. Meanwhile, non-oil exporting countries are assumed to have higher elasticities due to the labor-intensive nature of production. This means that non-oil economies will be relatively more responsive than oil exporters to changes of income. Remittance income from overseas workers in the non-oil economies are also taken into account in making poverty assessments for the future. These projections were based on historical information for the CARs, staff estimates of structural change in the poverty-income relationship over time and poverty elasticity's for other Asian countries. On other Asian Countries and other developing countries in general, see Dowling and Valenzuela (2004), Adams and Page (2004).

below the poverty threshold). These are followed by the other three CARs which have been able to bring poverty down to the range of 18%–22%. In all the CARs, rural poverty will remain higher than urban poverty while pockets of urban poverty are likely to persist. The analysis of future trends in poverty suggests that high rates of rural poverty will continue to stimulate rural to urban migration and that international migration is likely to continue at a significant rate. Even though poverty reductions will be substantial, some of the poorer CARs will need to devote more resources to reducing poverty by expanding current programs to fight poverty and developing new programs to address the needs of specific target groups. Developing labor-intensive sectors such as agriculture and tourism would also contribute to poverty reduction.

Table 3.8: Scenario 1 Poverty Baseline Forecast to 2015

Country	Year of National Poverty Estimate	Poverty Incidence in Base Year[a]	Forecast Poverty Incidence 2015[b]
Oil Exporters			
Azerbaijan	2001	49.6	29.7
Kazakhstan	2002	27.9	18.0
Turkmenistan	1998	29.9	21.9
Non-Oil Exporters			
Kyrgyz Republic	2001	47.6	30.1
Tajikistan	2003	56.6	33.2
Uzbekistan	2000	27.5	17.8
Total		39.9	25.1

Source: ADB (2004a) for historical data and staff estimates for forecasts.
[a] National Poverty Lines.
[b] Poverty incidence in 2015 based on projections using most recent poverty line estimates and staff estimates of elasticities of poverty reduction with respect to income.

In order to facilitate comparisons with other possible outcomes which are discussed as Scenarios 2 and 3 below, the outturn from Scenario 1 (Table 3.9) summarizes the performance of the CARs in four respects – GDP growth, GDP per capita in 2015, poverty incidence in 2015 and the US dollar value of manufactured exports per head in 2015. These variables can be compared with historical performances reported in Table 3.1.

Table 3.9: Summary of Scenario 1 – Business as Usual

	Real GDP growth 2005–2015 (% p.a)	Manufactured Exports/ per head 2015 ($)	GDP per Capita 2015 ($)	Poverty Incidence 2015 (population below national poverty, %)
Oil Exporters				
Azerbaijan	10.3	35.5	2,602	29.7
Kazakhstan	7.1	266.4	4,807	18.0
Turkmenistan	5.6	131.9	1,790	21.9
Non-Oil Exporters				
Kyrgyz Republic	5.6	59.4	739	30.1
Tajikistan	6.0	84.2	552	33.2
Uzbekistan	5.2	89.6	733	17.8
All CARs		126.2	1,871	25.1

3.3. Scenario 2 – Closing the Gap

Economic policy reforms will accelerate in all the CARs and evidence of a market-economy will be widespread. In the oil economies, an implementation schedule for WTO membership will be generally agreed and adhered to. And an open trade regime with each other and the rest of the world will also be maintained. Visible progress in large-scale privatization, corporate governance, and financial sector liberalization will be observed. In the non-oil economies, there will be a strong shift towards export promotion strategy and relevant incentives and institutions will be created. Significant efforts will be made on interest rate liberalization, reform of state-owned banks, and institutional development of capital markets. A vibrant private sector will emerge as privatization deepens and business procedures are reformed.

There will be a coherent and cohesive development of the CARs as a region through a number of initiatives in ***regional cooperation including transport, trade, and energy***. An integrated rail and road network system will be implemented. Customs codes will be harmonized, border procedures will be streamlined, and best practices information and inspection systems will be adopted. The prevalence of nontariff measures on regional trade will be significantly reduced as a result of improvements in institutions. An efficient regional energy market and system will emerge through implementation of structural reforms, tariff reforms, and significant investments in regional energy infrastructure. This will be accompanied by greater transparency and more rational pricing in line with market conditions.

Industrial competitiveness strategy will be emphasized to promote economic diversification throughout the region. These include strong emphasis on attracting FDI, linking enterprises in the CARs into global value chains according to comparative advantage, upgrading supplier development, investing in industry-relevant skills, and restructuring technology institutions. National partnerships between government and private sector institutions will be forged for developing and implementing competitiveness policies. These policies will be particularly significant in the non-oil economies.

Table 3.10: SCENARIO 2 – Closing the Gap

	Real GDP Growth 2005–2015 (% p.a.)	Manufactured Exports per head 2015 ($)	GDP per Capita 2015 ($)	Poverty Incidence 2015 (population below national poverty line, %)
Oil Exporters				
Azerbaijan	10.7	42.0	2,655	29.3
Kazakhstan	7.5	295.3	4,918	17.6
Turkmenistan	5.6	149.1	1,790	21.9
Non-Oil Exporters				
Kyrgyz Republic	6.7	72.4	829	20.7
Tajikistan	7.1	136.8	620	23.7
Uzbekistan	6.3	154.2	822	12.3
All CARs		165.6	1,939	20.9

The outturn of Scenario 2 in Table 3.10 can be compared with Scenario 1 to show the anticipated effect of accelerating progress in policy reforms, regional cooperation, and industrial competitiveness strategy. All four performance indicators improve. The oil exporters benefit from

regional cooperation initiatives and a regulatory environment that will manifest in a better integrated transportation network, fewer losses, and greater efficiency as a result of price and tariff reforms. Non-oil exporters benefit from industrial competitiveness strategy and the diversification of industrial development as well as greater regional cooperation. In terms of GDP growth, the oil exporters show a further small increase in GDP. The gains for the non-oil producers are somewhat higher as GDP growth accelerates by more than a percentage point in all three countries. This represents an average upward movement in growth of about 20% and results from a deepening of policy reforms, greater regional cooperation, and intensified efforts to develop a more competitive environment for the private sector. Manufactured exports per head also increase, particularly in the non-oil exporters. For example, in Tajikistan and Uzbekistan, manufactured exports per head increase in excess of 60%. The incidence of poverty also falls further in this scenario as the implementation of policy reforms and regional cooperation accelerate the pass-through of growth to the poorer segments of society. The impact is most dramatic among the non-oil exporters. In the Kyrgyz Republic and Tajikistan, poverty falls a further 10 percentage points to around 23% while the poverty rate in Uzbekistan declines to just over 12%, a remarkable achievement given poverty incidence in Uzbekistan of 27.5 at present. Poverty was slightly reduced in the oil exporting CARs, although the pass-through of policy reforms is not as dramatic due to the capital-intensive economic structures of these economies.

3.4. Scenario 3 – Falling Behind

This scenario suggests that a slowdown in efforts toward policy reform, regional cooperation, and the development of an industrial competitiveness regime. There will also be a moderate level of internal disruption and political instability, e.g. protests, strikes, terrorist incidents. Policy reform will take a backseat and further progress in key areas such as WTO membership, privatization, and financial sector reforms will be limited. Efforts to foster further regional cooperation will be few and far between and existing arrangements will be halfheartedly implemented. For instance, inconsistencies in transport regulations will remain and infrastructure development will be limited. In energy, rent-seeking monopolies will persist and efforts to rehabilitate regional energy infrastructure will be few, even on a bilateral basis. State intervention in the industrial sector will become more pervasive throughout the region and private sector initiatives will be increasingly stifled.

Table 3.11: SCENARIO 3 – Falling Behind

	Real GDP Growth 2005–2015 (% p.a)	Manufactured Exports per head 2015 ($)	GDP per Capita 2015 ($)	Poverty Incidence 2015 (population below national poverty line, %)
Oil Exporters				
Azerbaijan	9.0	28.3	2,290	31.2
Kazakhstan	6.2	201.0	4,387	18.8
Turkmenistan	4.3	79.5	1,555	23.4
Non-Oil Exporters				
Kyrgyz Republic	4.3	45.4	644	37.2
Tajikistan	4.7	65.5	482	43.3
Uzbekistan	4.0	55.9	645	21.8
All CARs		89.5	1,667	29.3

The outturn of Scenario 3 in Table 3.11 can be compared with Scenario 1 to show the anticipated effect of the slow progress in policy reforms, regional cooperation, and industrial competitiveness strategy. The result of falling behind is a more modest macroeconomic performance, slower progress in reducing poverty and significantly less progress in establishing a manufacturing base. Growth in GDP among the oil exporters falls by around 1% or more. This is because the lack of implementation of reforms and a breakdown in regional cooperation reduce efficiency in production and in transportation. It also weakens further the agenda for reducing energy losses and rationalizing prices. In the non-oil CARs, the results are similar, implementing structural reforms and facilitating the movement to a more competitive and diversified manufacturing base industrial sector flounder. In absolute terms, the impact of falling behind on GDP growth is anticipated to be generally the same for all the CARS. However, in relative terms, the impact will be much greater for the non-oil exporters. All three of these economies will suffer more than a 20% reduction in growth, from the range of 5%–6% to 4%–5%. GDP per capita also falls. The impact of falling behind on poverty and manufactured exports will also be greater in the non-oil producing CARs. Poverty incidence increase relative to the business-as-usual Scenario 1 by as much as 10 percentage points in Tajikistan and 8 points in the Kyrgyz Republic. As a result, poverty levels in 2015 will be over 37.2% in the Kyrgyz Republic and 43.3% in Tajikistan. The impact is smaller in the oil economies because of the nature of their production structure. For the CARs as a whole, manufactured exports per head in 2015 fall from an average of $126 in Scenario 1 and $165.6 in Scenario 2 to $89.5 in the falling behind Scenario 3. This result demonstrates the critical importance of implementing good policies in establishing a vibrant manufacturing sector.

3.5. Risks

There are two kinds of risks that could impact upon the forecast for the CARs – risks to the global economy and risks to the CARs. See Box 3.2 for a discussion of these risks.

Box 3.2: Risks

Risks to the global economy. A number of risks to the forecast could result in lower growth and poor economic performance of the world economy. Persistent higher oil prices are the most immediate threat, particularly to oil importing countries that are also intensive users of petroleum products, such as the United States (US)[20]. Higher oil prices will slow down growth in the world's largest economy, which will have an adverse effect to the rest of the world through international trade. Global financial imbalances could intensify as the US current account deficit continues to widen, and public sector debt increases in Japan and the European countries. The combination of gradually rising interest rates and the elimination of tax cuts could also affect the real estate and industrial sectors creating the likelihood of a more abrupt slowdown in the US economy. Higher interest rates and slower growth will also affect industrialized countries' international liquidity and put pressure on developing countries that have large financing needs. If adjustments to these liquidity conditions were smooth, weaknesses would become apparent in some markets that have benefited from an environment of great risk taking and low interest rates. A more abrupt increase in interest rates and liquidity would lead to recession in industrial countries. Much of the income added to the world economy in the past few years was from the PRC's rapid growth, a trend that is built into our forecast. If the PRC is not able to slow its growth gradually, a sharp economic slowdown that could have serious repercussions on world growth and the rest of Asia could result.

Risks to the CARs There are several risks to the outlook for the CARs. Some of these risks relate to the outlook for the world economy. These include sluggish world growth or a collapse in energy prices and/or weakness in the major commodity exports of the CARs (including cotton, aluminum, and gold). Terrorism is a continuing potential threat to the region, particularly where ethnic tensions could surface.

[20] See ADB (2005b) for an assessment of the consequences and challenges for the Asia and Pacific economies presented by higher oil prices.

More generally, political instability and poor governance pose considerable risks to the CARs' outlook. There seem to be increasing pressure for democratization in some CARs. Particularly relevant in this vein is the prospect of prolonged political and economic uncertainty in the Kyrgyz Republic following the sudden change of government, escalating tensions in Uzbekistan in the aftermath of the Andijan events, instability in Kazakhstan in the run up to the presidential election, and a possible resumption of civil strife in Tajikistan. To this list can be added increased tension between Azerbaijan and Armenia. The economic impact of these uncertain political developments is hard to forecast. Moderate political instability would have a relatively modest economic impact. Severe political instability, however, would further dampen the growth projections and raise poverty compared to the levels envisaged in Scenario 3

At the policy level, the timing of structural and policy reforms envisaged in the outlook could be delayed. These reforms include regional cooperation arrangements in the oil and natural gas sector that would increase revenue and reduce transit taxes as well as general regional cooperation measures to deal with trade and transit bottlenecks. Reforms in the non-oil economies that would lift productivity contribute to diversification of the industrial base; increased efficiency may also be delayed. Slower economic growth or slower implementation of initiatives to address social sector issues would also have an adverse impact on anticipated reductions in poverty. The overall impact of these developments on the performance of the CARs has been outlined in Scenario 3.

3.6 Summary

This chapter has highlighted the importance of policies in determining the future path of development in the CARs. Policy makers face stark choices. If the region continues on its present path (scenario 1 – business as usual) there will some gains but divergences between countries will intensify. If the region decides to follow policies which promote national self interest and rent seeking (Scenario 3 – falling behind) then economic prosperity will be adversely affected. If, on the other hand, the region embraces policy reform, regional cooperation and industrial competitiveness (Scenario 2 – closing the gap) then economic prosperity in all the CARs will be significantly enhanced. For the oil economies, much will depend on how the oil and gas windfalls are harnessed. All countries in the region will gain if these resources are used for the development of individual countries as well as to promote regional cooperation. For the non-oil exporters, the development of manufacturing competitiveness and regional cooperation are key components of a successful strategy.

4. THEME CHAPTER – BENCHMARKING INDUSTRIAL COMPETITIVENESS

4.1 Introduction

In the wake of globalization, policy makers in the CARs are increasingly emphasizing a competitive industrial sector as an engine of growth, economic diversification, and job creation. Kazakhstan adopted an innovative industrial strategy in 2003 while Azerbaijan and Uzbekistan are reviewing their policy framework for competitiveness. A systematic assessment of industrial competitiveness in the region can highlight the performance of the industrial sector and guide future policy development.

Using selected industrial performance indicators for the CARs in a comparative context with other transition economies most readily captures the industrial competitiveness record of the region, highlights performance gap, and suggests policy options. Referred to as benchmarking, this approach reduces and transforms industrial performance indicators into a single number for a sample of transition countries. It also permits analysis of influences on industrial competitiveness in transition economies.

This chapter has three parts: (1) the recent industrial competitiveness record of the CARs; (2) the presentation of a transition economies manufacturing export competitiveness index (TEMECI) for the CARs and other transition economies; and (3) key factors underlying the competitiveness record of the CARs and other transition economies.

4.2 Recent Industrial Performance

By way of background to the benchmarking exercise, a brief look at some aspects of industrial performance in the CARs and the composition of manufactured exports (see Tables 4.1 and Table 4.2) would be useful. The CARs vary significantly in their level of industrialization. In 2003, manufacturing value added (MVA) per capita in the oil exporters ($189.4) was nearly four times higher than the non-oil exporters ($49.7), indicating that a vibrant oil and gas sector has stimulated manufacturing development. Kazakhstan (MVA per capita of $295.5) has the largest industrial base among the CARs while the Kyrgyz Republic had the smallest. Compared to industrial development, there seems less variation in manufactured export development among the CARs. In 2003, manufactured exports per capita in non-oil exporters as a whole ($33.2) were about a third of that of the oil exporters ($88.8).[21] Kazakhstan has the largest export base in the region (with manufactured exports per capita of $142.1).

[21] It is worth noting that the region's manufactured export base is highly concentrated and linked to country size. Kazakhstan (50%) and Uzbekistan (21.3%), the two largest economies, dominate the total value of manufactured exports in the CARs ($3.7 billion in 2003). Meanwhile, the Kyrgyz Republic had 12.3%, Tajikistan 6.8%, Turkmenistan 6.1%, and Azerbaijan 3.5%.

Table 4.1: Selected Indicators of Industrial Performance in Central Asia

Country	Annual Average MVA Growth (a)	MVA per capita ($)	Manufactured Exports ($, mn)	Annual Average Manufactured Export Growth (a)	Manufactured Exports per capita ($)
	1998–2003	2003	2003	1998–2003	2003
Oil Exporters	10.4%	189.4	2,476.5	11.0%	88.8
Azerbaijan	25.2%	138.8	134.4	11.2%	16.4
Kazakhstan	10.6%	295.5	2,117.0	10.1%	142.1
Turkmenistan	-2.8%	134.0	225.0	23.0%	46.9
Non-oil Exporters	-5.9%	49.7	1,228.2	7.8%	33.2
Kyrgyz Republic	-1.0%	25.4	193.1	5.4%	38.2
Tajikistan	6.8%	56.8	250.1	7.4%	39.7
Uzbekistan	-8.0%	66.9	785.0	8.5%	30.7
Total CARs	4.4%	129.2	3,705.0	9.9%	57.1

Notes: (a) Current $, compound growth rate.
Sources: ADB (2005); IMF (2004d); IMF (2004f); IMF (2005a); National Statistics Committee of the Kyrgyz Republic; World Bank *World Development Indicators Online.*

These data suggest that the CARs differ considerably in their manufactured export structures.[22] Some CARs seem to have an export structure oriented towards simple labor-intensive industries while others are dominated by more complex capital and technology intensive industries. Country-level export patterns reflect comparative advantage, incentive policies, and historic connections with overseas markets.

Table 4.2: Composition of Manufactured Exports, 2003 ($'000 and %)

	Azerbaijan		Kazakhstan		Kyrgyz Republic		Tajikistan		Turkmenistan[a]	
	Values	%	Values	%	Values	%	Values	%	Values	%
Total	**134,385**	**100**	**2,117,130**	**100**	**193,082**	**100**	**250,600**	**100**	**171,658**	**100**
Textiles	7,568	5.6	7,746	0.4	69,904	36.2	231,200	92.3	102,671	59.8
Garments, footwear	142	0.1	5,089	0.2	682	0.4	-	-	39,325	22.9
Wood & wood products	589	0.4	195	0.0	358	0.2	100	0.0	-	-
Raw leather, rubber	105	0.1	65,788	3.1	5,355	2.8	1,300	0.5	597	0.3
Nonmetals, cement	35	0.0	4,232	0.2	26,181	13.6	100	0.0	880	0.5
Others	9,648	7.2	26,173	1.2	3,850	2.0	500	0.2	269	0.2
Paper	531	0.4	7,114	0.3	1,427	0.7	-	-	-	-
Chemicals, plastics	50,410	37.5	258,044	12.2	22,745	11.8	4,800	1.9	11,183	6.5
Iron & Steel	27,474	20.4	1,470,584	69.5	-	-	-	-	219	0.1
Metal manufactures	1,207	0.9	41,480	2.0	19,828	10.3	-	-	1,369	0.8
Machinery, equipment	27,900	20.8	157,516	7.4	28,232	14.6	2,800	1.1	967	0.6
Transport equipment	8,776	6.5	73,169	3.5	14,520	7.5	9,800	3.9	14,178	8.3

Sources: For Azerbaijan, Kazakhstan, and Turkmenistan, International Trade Statistics (www.intracen.org); for the Kyrgyz Republic and Tajikistan, National Statistics Committee.
[a] For 2000 only.

[22] Reliable and up-to-date information on manufactured exports for the CARs is difficult to obtain. The present study uses a combination of data from the UNCTAD/WTO International Trade Centre for Azerbaijan, Kazakhstan, and Turkmenistan and national sources for Tajikistan and the Kyrgyz Republic. The data in Table 3.2 for Turkmenistan are for 2000. Recent disaggregate data were not available for Uzbekistan.

Textiles and garments comprise over 80% of manufactured exports in Tajikistan and Turkmenistan (driven in part by foreign investors from Turkey and Korea) and about 37% of the Kyrgyz Republic's manufactured exports. Meanwhile, Kazakhstan's manufactured exports are dominated by iron and steel with some focus on chemicals and plastics as well as machinery and transport equipment. Azerbaijan also seems to have a mix of iron and steel, chemicals, and machinery.

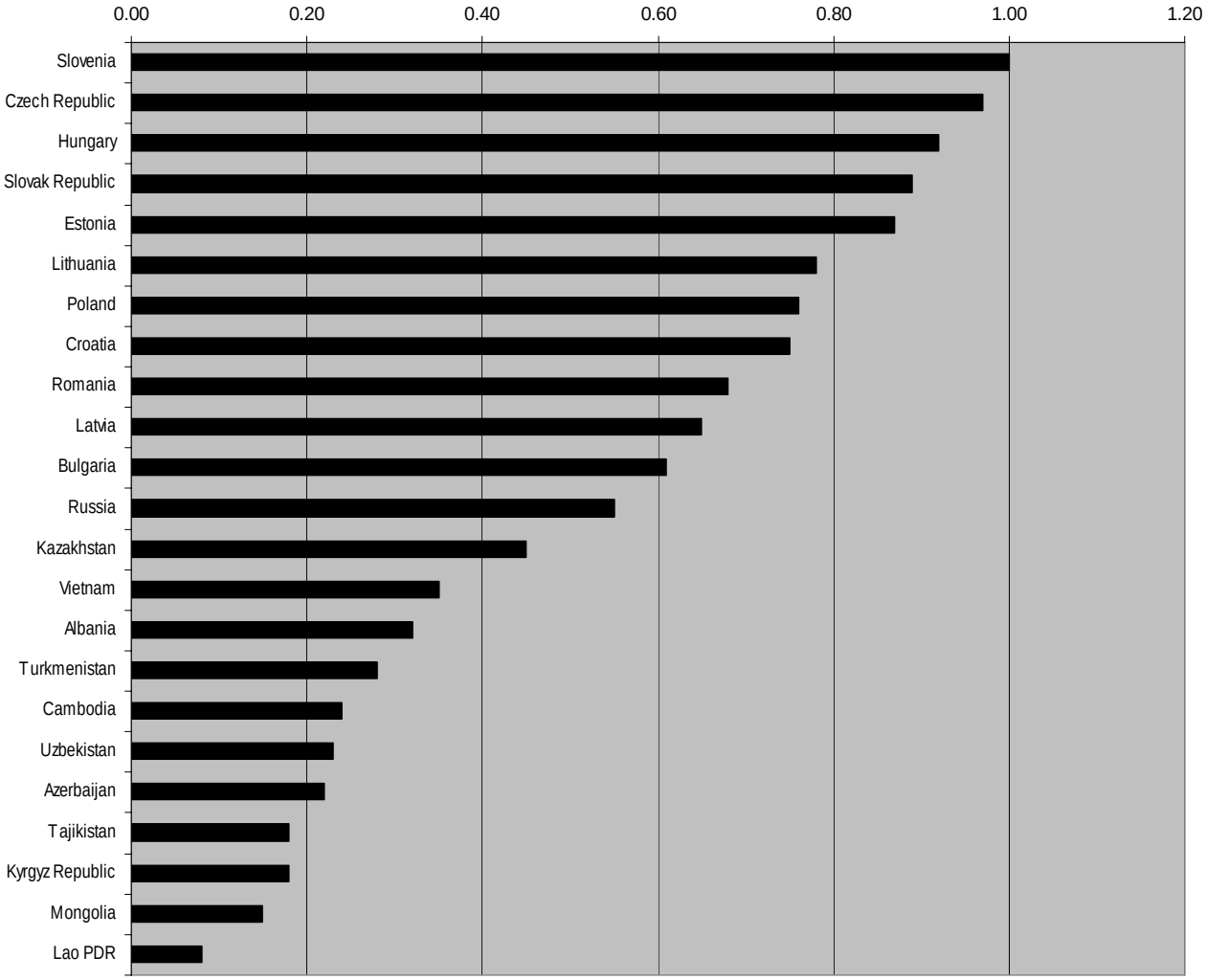
Machinery and transport equipment exports are an indicator of structural change and greater technological sophistication of exports. Higher shares of machinery and transport equipment exports are associated with improved export competitiveness in high technology industries. In terms of export shares, Tajikistan and Turkmenistan seem to have the least machinery and transport equipment exports while the rest have higher shares.

4.3 Comparisons with Transition Economies

Information on the CARs recent industrial performance presented above can be conveniently summarized into an index of industrial competitiveness performance. This index, known as TEMECI, was computed to benchmark 23 transition economies in 2003. TEMECI is a composite index made up of three variables (manufacturing value added per capita, manufactured exports per capita, and machinery and transport equipment per capita) and takes values between 0 and 1. Higher values of TEMECI indicate a greater level of competitiveness.[23] The main features of the TEMECI are presented in Appendix 4, Box A4.1.

[23] The development of TEMECI draws on the benchmarking methodology developed by the United Nations Industrial Development Organization (UNIDO) *Word Industrial Development Report 2004,* Lall and Weiss (2004), Wignaraja and Taylor (2003) and Wignaraja and Joiner (2004).

Figure 4.1: TEMECI, 2003



The benchmarking exercise using TEMCECI allows individual CARs to assess their industrial competitiveness performance in relation to

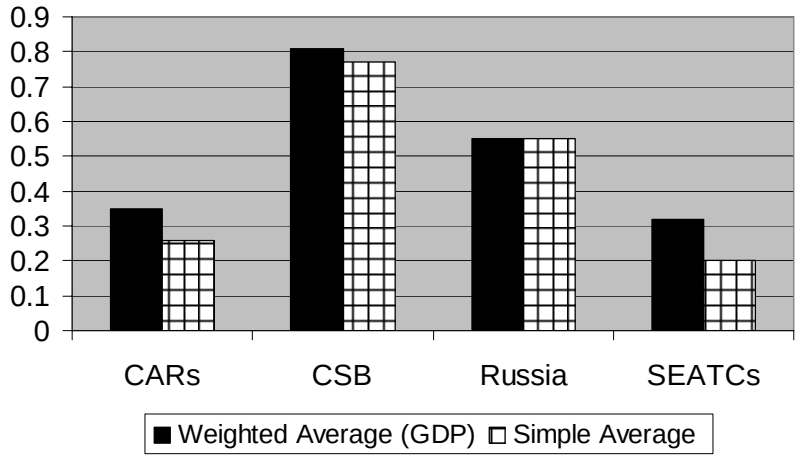
- transition countries at a similar level of development, or of similar characteristics, which they would like to outperform; and
- transition countries at a higher level of development, whose performance they wish to emulate, and whose policy strategies they could learn from to achieve it.

Studies of the economic development of the CARs sometimes include Russia and Central and Southeastern Europe Baltics (CSB) economies as comparators given their legacy of Soviet rule, common institutions developed under socialism, and adoption of market-oriented economic reforms. This study follows suit and includes Russia and 12 CSB economies in the benchmarking exercise. It also includes four Southeast Asian Transition Countries (SEATCs) comprising Cambodia, Lao People's Democratic Republic, Mongolia, and Viet Nam. Intra-Asian comparisons of industrial competitiveness experience during transition seem rare in the literature.

Figure 4.1 shows the ranking of the TEMECI for the 23 transition economies while Table A4.1 provides the underlying data values. The leading economies are the CSB while Russia is ranked 12th. Towards the low end of the scale, the CARs span a narrow range from rank 13 to 21. It comes as little surprise that oil and gas rich Kazakhstan leads the CARs in terms of industrial competitiveness. It has also undertaken macroeconomic stabilization and some market-oriented economic reforms to foster private industrial enterprises. Furthermore, the oil exporters do somewhat better as a group than non-oil exporters.

The findings on the country-level rankings are reflected in the pattern of regional competitiveness. Figure 4.2 shows regional TEMECIs for 2003 estimated from (a) GDP weighted averages of country-level TEMECIs for each region and (b) simple averages of country-level TEMECI's for each region. Both methods display a similar pattern across the four regions. Taking the more accurate GDP weighted average, the CSB region (0.81) has the best performance among the four regions. Russia (0.55) comes out at about two thirds the level of the CSB region while the CARs (0.35) and SEATCs (0.32) are at about one third. Interestingly, the GDP weighted TEMECI puts the CARs slightly ahead of the SEATCs while the simple average TEMCI suggests a somewhat bigger difference between the two regions (Appendix 4).

Figure 4.2: Regional Averages of TEMECI 2003



4.4 Explaining Industrial Competitiveness

Ranking of industrial competitiveness performance leads to an examination of key factors associated with high and low performance in the CARs and other transition economies. Four factors have a considerable effect on industrial competitiveness performance: Reforming the economic incentive regime, acquiring industrial technology upgrading skills, and building infrastructure. These factors represent major aspects of economic incentive regime and supply-side of the economy and their interaction drives industrial competitiveness. The remainder of the section attempts to assess the CARs against the comparator economies (CSB economies, Russia, and the SEATCs) on the basis of the four factors noted above.

4.1.1. Reforming the Economic Incentive Regime

A market-friendly economic incentive regime—characterized by macroeconomic stability, low import protection, and streamlined bureaucratic procedures—is fundamental to competitive manufacturing activity. Such a regime enables industrial enterprises to reap benefits of

competition, a predictable environment for investment, economies of scale in production, and low transactions costs. Three measures of different aspects of the economic incentive regime for the CARs and other transition regions are shown in Table 4.3—annual average inflation, average tariffs on manufactured products, and the number of days required to start a business.

Table 4.3: Factors Affecting Competitiveness in Transition Economies

	CARs	CSB	Russia	SEATCs
Economic Incentive Regime				
1. Annual Average Inflation (2001–2003)	10.9	5.6	17.0	5.1
2. Average Tariffs on Manufactured products (%) latest	7.5	6.3	10.1	11.6
3. Starting a Business Duration (days), latest	51.0	42.3	36.0	92.0
Industrial Technology				
4. Annual Average FDI per capita, $ (2001–2003)	61.1	248.4	16.4	16.1
5. R&D Expenditure per capita, $ latest	8.7	90.4	56.0	n.a
Skills				
6. Tertiary Technical Enrolment per 1000 pop., latest	5.0	10.4	28.0	4.9
Infrastructure				
7. Railways Total KM per million pop., 2002	351.6	799.0	597.7	331.0
8. Telephone mainlines per 1000 pop., 2003	79.3	305.5	242.2	28.7

Sources: United Nations Conference on Trade and Development (UNCTAD) (2004); United Nations Educational, Scientific and Cultural Organization (UNESC)Institute for Statistics website; World Bank, *World Development Indicators On-line;* World Bank Doing Business Website*;* WTO (2004); CIA (2005).

Economic reforms implemented by some CARs suggest that economic incentives have typically become more market-oriented than at the start of the transition process in the early 1990s. Insufficient progress in some areas, however, has meant that the region as a whole seems to fall short of the achievements of more competitive transition economies. Import tariffs on manufactured goods in the CARs of about 7.5% are fairly low by the standards of other transition economies like Russia and the SEATCs. Nevertheless, import tariffs in the CSBs are somewhat lower than CARs' levels, suggesting that there is still some room for tariff reform. Furthermore, it takes more days to start a new business in the CARs (51 days) than in the CSB economies and Russia, suggesting that streamlining of business procedures can reduce transactions costs for business and improve economic efficiency.

4.1.2. Acquiring Industrial Technology

Access to the latest technological information, organizational methods, and production technologies is critical for creating competitiveness in manufacturing enterprises. Industrial technology can be acquired by attracting FDI from abroad or by investing in domestic technological effort (particularly research and development activities). In practice, both are complementary rather than substitutes. FDI is probably the most effective vehicle for obtaining the latest international technologies while domestic technological effort is often required to learn about imported technologies, adapt them to local conditions, and improve upon them over time. Foreign investment per capita and R&D expenditures per capita capture the two aspects of industrial technologies (see Table 4.3). On a per capita basis, the CARs ($61.1) seem to get more foreign investment than Russia and the SEATCs. Nevertheless, FDI inflows per capita are

much lower in the CARs than the CSBs. Furthermore, as discussed in Chapter 2, FDI inflows in the CARs are highly concentrated in the oil exporters (particularly Azerbaijan and Kazakhstan) which account for bulk of inward investment. Azerbaijan and Kazakhstan seem to be at the forefront of R&D efforts in the CARs.[24] Although in terms of R&D per capita, the CARs ($8.7) rank considerably below both the CSBs and Russia.

4.1.3. Upgrading Skills

A strong base of productive human capital is recognized as the basis for industrial innovation and competitiveness. Tertiary level technical skills (i.e., math, science, engineering, and information technology) are particularly vital for absorbing fast-paced modern technologies from abroad and economic diversification from resource-based industries to technology-intensive industries. Tertiary technical enrollment in the CARs (5 per 1000 population) is half the levels of the CSB economies and one fifth Russian levels (see Table 4.3). This suggests that the CARs are deficient in tertiary level technical skills compared to more competitive transition economies. National level data suggest that Kazakhstan leads the CARs in terms of tertiary-level technical enrolments.[25]

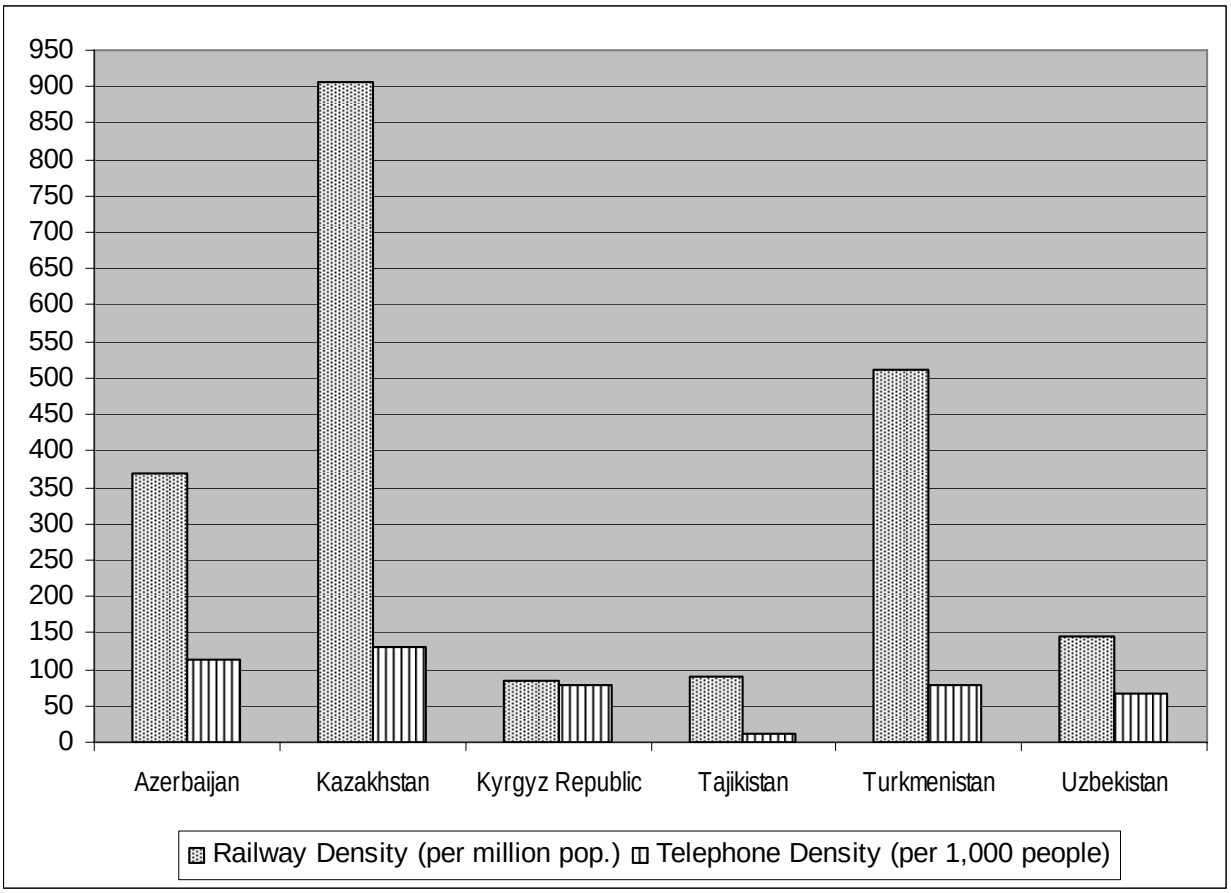
4.1.4. Building Infrastructure

Efficient and cost-competitive physical infrastructure (roads, railways, and air transport) allows businesses to compete in the global market without constraint. For landlocked economies like the CARs, modern information and communication technology (ICT) infrastructure allows countries to stay abreast of the latest production technologies and access markets. Total railway kilometers per million population and telephone mainline per 1000 people are provided in Table 4.3 to capture physical and ICT infrastructure. On both measures of infrastructure, the CARs perform better than the SEATCs but less well than the CSB economies and Russia. Within the CARs, the oil exporting economies seem to have higher railway and telephone densities relative to their population than the non-oil exporting economies (see Figure 4.3). This underlines the role of oil and gas revenues in financing large-scale infrastructure projects. As expected, Kazakhstan has the highest railway and telephone densities among the oil exporters. Turkmenistan comes next in terms of railway densities while Azerbaijan is second on telephone densities. Uzbekistan seems to have relatively low infrastructure indicators given the size of its economy.

[24] UNESCO only provides data on R&D expenditures per head for three CARs: Kazakhstan ($13.8), Azerbaijan ($7.6) and the Kyrgyz Republic ($4.6).

[25] The available tertiary-level technical enrolment ratios for the CARs were Kazakhstan (6.9), the Kyrgyz Republic (5.8), and Tajikistan (2.3).

Figure 4.3: Railway and Telephone Densities



Indeed, Central Asia as a whole faces massive infrastructure needs and a funding challenge. A conservative ADB estimate suggests that around $2–3 billion per year is needed in 2005–2010 to fund new infrastructure in the region.[26] The figure excludes energy sector investments and includes transport, telecommunications, and water supply needs. Even this figure will need a doubling or tripling of current infrastructure expenditure in Central Asia on these items of around $1 billion.

[26] Staff estimate for Central Asia based on projected infrastructure to GDP ratios in 2005–2010 for low and middle-income East Asian economies from ADB/Japan Bank for International Cooperation/World Bank (2005).

5. CONCLUSIONS

This study seeks to guide CARs policy makers by suggesting the direction of future economic performance as well as indicating key policy issues. The review in section 2 demonstrated that the region has made a dramatic turn around from negative growth in the years just after the beginning of transition. This transition started in the late 1990s and continues today.

In section 3 a detailed description of the challenges and opportunities in the manufacturing sector highlighted the scope for further expansion of the sector and the policy environment required to achieve more rapid growth.

The future scenarios described in section 4 demonstrates the importance of implementing policy reforms and intensifying efforts to improve regional cooperation. As we saw in Scenario 2 of section 4 appropriate policy reform and greater regional cooperation result in more rapid growth in both the level of income and per capita income, as well as in the expansion of manufactured exports and reduction in poverty. The overall outlook for Central Asia up to 2015 reviewed in section 4 is positive under Scenarios 1 but even more so under Scenario 2. In this, the most optimistic scenario, the region seems set to join the ranks of middle-income countries driven by robust GDP growth of more than 7 percent in 3 CARs and in excess of 6% annually in 5 of the 6 CARS. The region as a whole will have GDP per capita of nearly $2000 per capita by 2015. Furthermore, poverty will fall to about 21% of the regions in Scenario 2. For the rejoin the oil and gas sector will underlie economic prosperity alongside an emerging private manufacturing sector. At the same time, some outstanding challenges will remain. In spite of rapid growth, poverty levels will be unacceptably high in several countries. The nascent manufacturing sector and particularly private enterprises need to be supported by business-friendly policies. Slow population growth means that the domestic market and skill base will have to be enhanced by regional cooperation and labor migration. Divergence in economic performance between oil and non-oil exporting CARs will persist. Comparisons of Scenarios 1 and 2 with Scenario 3 highlight the importance of policies in determining the future path of development in the CARs. In very real sense policy makers face stark choices. If the region continues on its present path (scenario 1 – business as usual) there will some gains but divergences between countries will intensify. If the region decides to follow policies which promote national self interest and rent seeking (Scenario 3 – falling behind) then economic prosperity of all the CARs will be adversely affected. If, on the other hand, the region embraces policy reform, regional cooperation and industrial competitiveness (Scenario 2 – closing the gap) then economic prosperity in all the CARs will be significantly enhanced.

The realization of this more optimistic outlook will depend upon a number of factors. Some are driven by external influences while others are within the realm of policy makers. It is beyond the scope of this study to provide detailed policy agendas for individual countries, sectors, and enterprises. Nevertheless, based on the analysis, the main policy priorities seem to be (see also Table 3.9):

1. **Economic Reform and Prudent Macroeconomic Management**. A liberal, low inflation policy environment is fundamental to growth, poverty reduction, and development. Key aspects include effective budgetary management, further development of monetary instruments, and monetary policy, and maintenance of a competitive real exchange rate. In addition to these, oil-rich economies will need to maintain a prudent balance of incentives and investments to ensure resources to develop both oil and non-oil sectors.

2. Cost-Competitive Infrastructure. Given the distance from international markets, improving infrastructure is critical. Some of the projects could include improving in the internal and external road network; expanding, harmonizing and modernizing the railway network; investing in ICT infrastructure; and ensuring free and flexible air transport. As discussed in Chapter 4, the region would have to double infrastructure spending to $2 billion–3 billion a year in 2005–2010 to meet infrastructure needs.

3. Oil and Gas Resources. This sector is likely to remain the lynchpin of the region for the foreseeable future and it is thus important to nurture this sector be nurtured effectively. A transparent, predictable policy environment is associated with continued inward investment. Moreover, key factors in successful energy sector development need to be considered such as rationalizing power prices to reflect cost considerations, developing pipelines, investing judiciously on energy resources, and promoting environmental management in line with best international standards are all key factors in successful energy sector development.

4. Creation of Manufacturing Competitiveness. An internationally competitive manufacturing base will bring many developmental benefits including increased exports, rapid technology transfer, and employment. Proposed key priorities include promoting small and medium enterprise development through financial and nonfinancial support, attraction of export-oriented foreign investment through competitive incentives and more aggressive promotion, streamlining of business procedures, and encouraging spillovers from oil and gas industries. Attention to nontraditional trading partners, particularly toward the PRC and India may expand trade and investment opportunities.

5. Poverty Reduction. The persistence of poverty requires special attention in future economic strategy. Possible measures might include providing targeted provision for groups at risk, expanding the provision of microfinance, and increasing expenditure on social sectors and education of women. The development of labor-intensive sectors such as agriculture and tourism would also contribute to poverty reduction.

6. Regional Cooperation. Small and segmented domestic markets, high infrastructure development costs, transit bottlenecks, and dispersed resource endowments make regional cooperation crucial to future prosperity. Some proposed initiatives include reducing barriers to regional trade and investment, harmonizing regional customs administration, resolving of disputes over the water-energy nexus, and promoting further cooperation to resolve problems in transport of energy via pipelines.

The differential thrust of these initiatives between oil economies and non-oil economies will vary depending on initial conditions, current policy environment, implementation capacity and quality of entrepreneurial skills. A policy matrix with examples of selected policy priorities is shown in Table 3.9. The items contained in the table are meant to be indicative and should be tailor-made to the circumstances of individual CARs.

Table 5.1: Examples of Policy Priorities for Oil and Non-Oil Exporters

Category	Oil Exporters	Non-Oil Exporters
Macroeconomic management and economic reform	⇒ Promoting prudent fiscal management ⇒ Targeting monetary policy to address inflation ⇒ Managing the oil fund with transparency ⇒ Completing reforms for membership in the World Trade Organization	⇒ Liberalizing restrictions on foreign trade ⇒ Promoting competitive real exchange rate ⇒ Strengthening tax collection
ost-competitive infrastructure	⇒ Modernizing the national railway system ⇒ Integrating the regional road, rail and air transport systems ⇒ Reforming telecommunications ⇒ Reforming water pricing	⇒ Upgrading air transport system ⇒ Building roads ⇒ Reforming electricity tariffs ⇒ Integrating the regional road, rail and air transport systems
Oil and gas	⇒ Developing oil and gas pipelines ⇒ Promoting environmental management	⇒ Formulating an energy sector strategy
Creating export competitiveness	⇒ Attracting foreign direct investment for the manufacturing sector ⇒ Streamlining business procedures	⇒ Promoting small business start-up ⇒ Providing low-cost finance for small and medium enterprises (SMEs) ⇒ Supporting SME technology
Poverty reduction	⇒ Increasing expenditure on health and education ⇒ Investing in rural water supply and sanitation	⇒ Reforming the health care system ⇒ Targeting female educational enrollment
Regional cooperation	⇒ Harmonizing customs systems and border procedures ⇒ Reducing barriers to regional trade and investment ⇒ Resolving disputes over water-energy nexus	⇒ Harmonizing customs systems and border procedures ⇒ Reducing barriers to regional trade and investment ⇒ Resolving disputes over water-energy nexus

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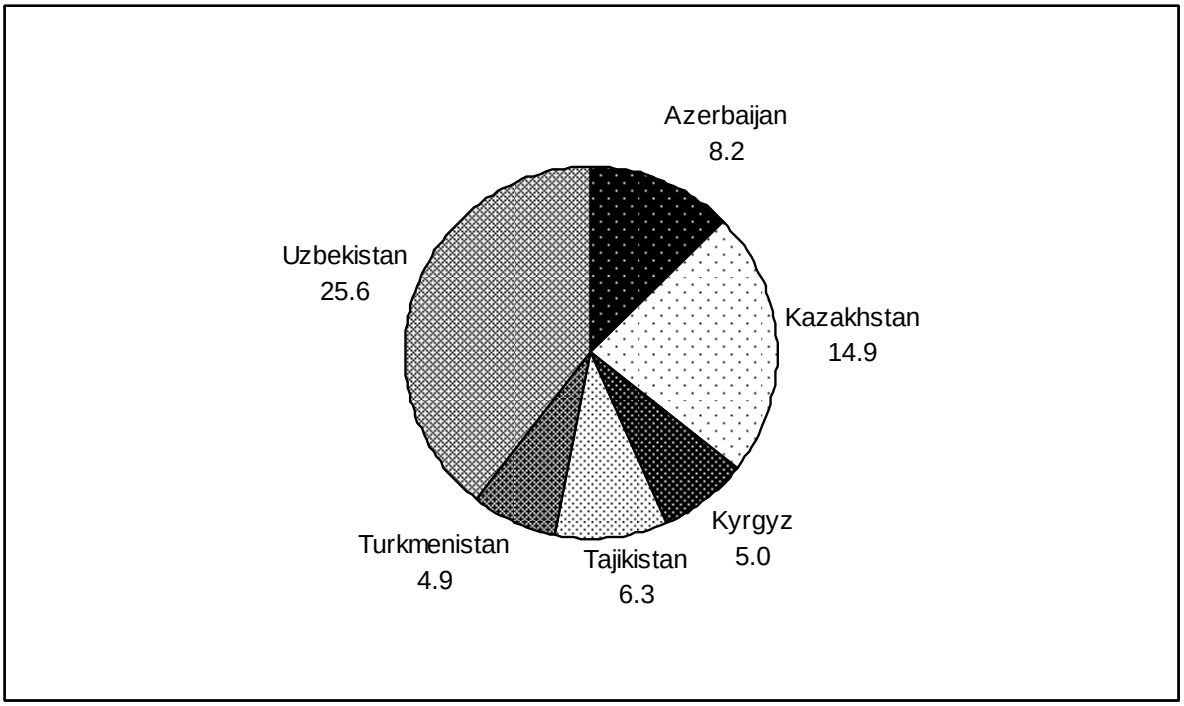
A SNAPSHOT OF THE REGION

Appendix Figures A1.1 to A1.3 provide data on the population, geographical area, and gross domestic product (GDP) for the Central Asian Republics (CARs). Some interesting findings include:

A. GDP, Population, and Geography

Although the individual CARs are quite small economies, the total population of the region (about 65 million) and total GDP (about US$72 billion) is similar to that of medium- sized economies like the Philippines, Viet Nam, or Egypt.[1] This provides for a reasonable regional market. Achieving of economies of scale in production and distribution associated with a regional market is thus a key imperative for regional cooperation.

Figure A1.1: Population (in million), 2004



Source: World Bank World Development Indicators Online.

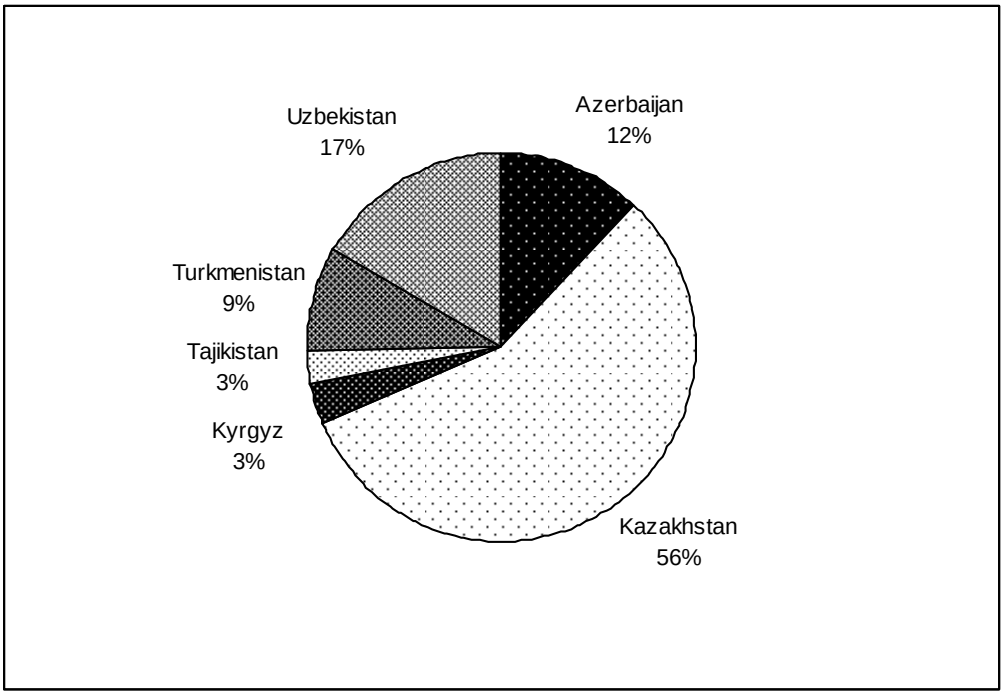
The geographical size of the CARs, however, is disproportionate to its population size. A total surface area of 4,081,000 square kilometers (km^2) in the CARs is similar to that of the whole of Western Europe or India, which can be counted among the world's largest regions. The population of the CARs is typically concentrated in the main cities and there are vast tracts of sparely populated rural areas.

Although Uzbekistan has the largest population, Kazakhstan dominates the region both in geographical size and in the level of income. Kazakhstan has about 70% of the land area compared with other countries in this region and generates nearly 50% of income in the region.

[1] The Philippines has 83 million people and a GDP of $86.4 bn in 2004, Viet Nam has 82.2 million people and a GDP of $45.2 bn, and Egypt has 68.7 million people and a GDP of $75.1 bn. The data are from the World Bank World Development Indicators Online.

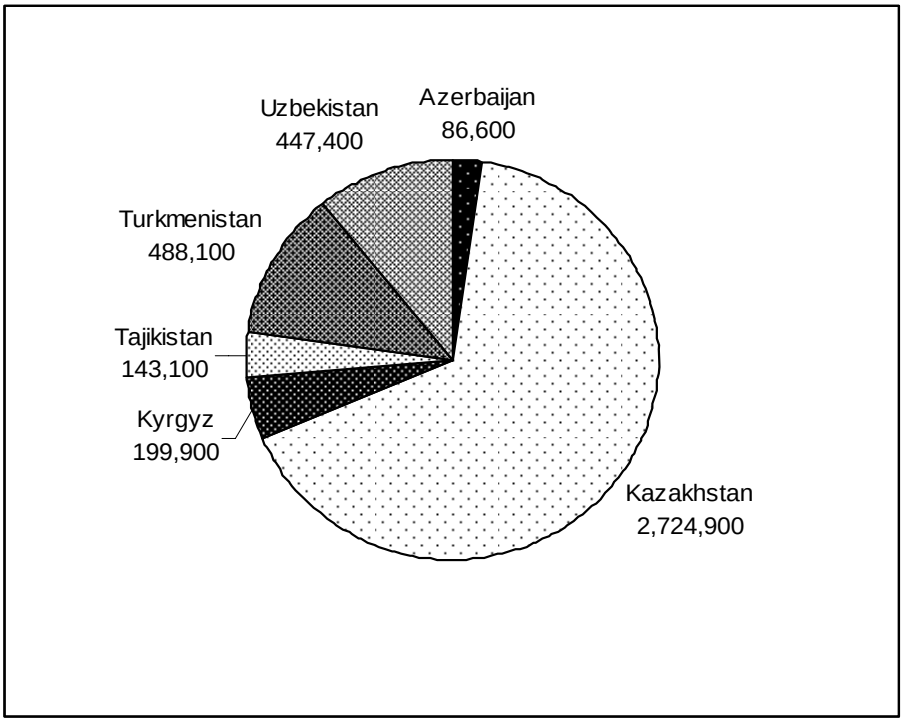
Using its abundant natural resources of oil and natural gas, it has the potential to serve as an engine of growth for the rest of the region, particularly in facilitating the flow of materials to Russia, Europe, and the People's Republic of China (PRC).

Figure A1.2: GDP Shares in CARs (%), 2004



Source: World Bank World Development Indicators Online.

Figure A1.3: Geographical Size (in km^2), 2004



Source: World Bank World Development Indicators Online.

The region is rich in minerals and has a strong agricultural base. Much of the recent growth in the region has been achieved as a result of higher prices, increased production, and further investment in the minerals and agricultural sectors. These include gold mining in the Kyrgyz Republic; gas and oil investment, production and export from Azerbaijan and Turkmenistan; petroleum exports and petrochemical production in Kazakhstan; and cotton production and exports from Uzbekistan.

B. Natural Resources

The CARs are blessed with abundant natural resources of oil, natural gas, gold, and other minerals. Historically, these resources were exploited and developed when these countries were a part of the former Soviet Union. After independence their appropriate use and development became a key component in the economic growth strategy for the region.

Resource profile. It is necessary to understand the natural resource profile for the CARs to appreciate the importance and scope of these resources for the economic development of the region. Natural resources, particularly oil and natural gas and (to a lesser extent) gold and aluminum, represent a significant proportion of exports of the region as well as the major source of government tax receipts. These tax revenues, in conjunction with foreign direct investment and some domestic private savings, are the funding source for the buildup of industrial capacity as well as provide resources for social sector spending on education and health. If natural resources are developed in an effective and efficient way, the region can grow quickly. New technology that will result in diversifying the industrial base can de developed. As growth accelerates, poverty can be reduced and a virtuous upward cycle of growth and development can begin. If these resources are squandered, the region has virtually no chance of achieving rapid development and significant strides in reducing poverty.

To begin this natural resource profile, consider a quick sketch of proven reserves and production of oil and natural gas (see Tables A1.2 and A1.3). The oil exporting CARs are major exporters of both oil and natural gas. Both Kazakhstan and Uzbekistan have more than 1% of proven reserves of natural gas and Uzbekistan and Turkmenistan produce more than 2% of the world total. Kazakhstan ships 1.4% of world oil produced and Azerbaijan, Kazakhstan, and Turkmenistan all have proved reserves of more than 500 million barrels. In terms of current exports, all four countries have sufficient reserves to maintain production at the current rate for more than 3 decades.

Breaking down the region by resources, we see from Table A1.1 that four countries are resource-rich in the sense that they derive most of their export earnings and government revenue from these natural resources. They are the oil exporters to which we could add the Kyrgyz Republic, which mines and exports gold. The remaining two CARs (Tajikistan and Uzbekistan) depend on cotton for the bulk of their exports although Uzbekistan has the potential to be an oil exporter.

Table A1.1: Oil Endowments and Production, 2003

Proven Reserves	Oil reserves (billion barrels)	Share of total world oil reserves (%)
Azerbaijan	7.0	0.6
Kazakhstan	9.0	0.8
Turkmenistan	0.5	.05
Uzbekistan	0.6	0.1
Saudi Arabia	262.8	23.0
Iran	130.7	11.4
Iraq	115.0	10.0
Russia	670.0	6.0
Total World	1146.3	

Annual Production	Oil production (million barrels)	Share of total world oil production (%)
Azerbaijan	313	0.4
Kazakhstan	1106	1.4
Turkmenistan	210	0.3
Uzbekistan	487	0.6
Saudi Arabia	9817	12.8
Iran	3852	5.1
Iraq	1344	1.8
Russia	8543	11.4
World	76777	

Source: British Petroleum 2004.

Table A1.2: Natural Gas Endowment and Production, 2003

Proven Reserves	Gas reserves (trillion cubic meters)	Share of total world gas reserves (%)
Azerbaijan	1.4	0.8
Kazakhstan	1.9	1.2
Turkmenistan	1.1	0.7
Uzbekistan	1.9	1.2
Iran	26.7	15.2
Saudi Arabia	6.7	3.8
Qatar	25.8	14.7
Russia	47.0	26.7
USA	5.2	3.0
World	175.2	

Annual Production	Gas production (billion cubic meters)	Share of total world gas production (%)
Azerbaijan	4.8	0.2
Kazakhstan	12.9	0.5
Turkmenistan	55.1	2.1
Uzbekistan	53.6	2.0
Russia	578.6	22.1
USA	549.5	21.0
World	2619.0	

Source: British Petroleum 2004.

MACROECONOMIC POLICIES AND TRENDS

A. Monetary policy

There was rapid growth in the money supply in several CARs (see Table A2.1). This increase in the money supply did lead to some upward price pressure in Tajikistan, Turkmenistan, and Uzbekistan. In Tajikistan, monetization of the economy has remained quite low as lingering memories of the civil war disruption, poor government performance, large budget deficits, and high inflation in the early 1990s remain. Combined with continued rapid monetary growth, this has resulted in higher inflation rates than in other CARs (see Table 2.3).

Monetary expansion did not generally lead to acceleration in the rate of inflation in the remaining countries for several reasons. First, there was a growth in the rate of monetization of the CARs economies as these economies returned to a more stable macroeconomic footing. The rate of monetization of the economy increased in Kazakhstan, Azerbaijan, and Turkmenistan beginning in the mid-1990s. In particular, Kazakhstan has a credit boom in the last few years as economic growth has accelerated. Secondly, there was an increase in the amount of credit extended by the banking system in response to expansion in the minerals sector, particularly in Azerbaijan and Kazakhstan. Thirdly, there was also a buildup in unsterilized foreign assets which did not necessarily contribute to an excess demand for goods.

Table A2.1: Money and Quasi Money (M2) as a % of GDP

Country	Average 1998–2001	2002	2003	2004
Oil Exporters				
Azerbaijan	12.0	13.0	14.3	17.9
Kazakhstan	12.0	17.0	18.6	…
Turkmenistan	13.0	…	…	…
Non-Oil Exporters				
Kyrgyz Republic	12.0	14.6	17.5	20.6
Tajikistan	5.0	8.2	8.7	7.1
Memo Items				
Russian Federation	19.0	23.0	26.0	…
Hungary	43.0	45.0	46.0	…

Sources: WB World Development Indicators Online and the Asian Development Bank (ADB) Key Indicators 2005.

B. Fiscal policy

Strength in the minerals sectors of many of the CARs has contributed to improved fiscal performance in the past 5 years. Overall budget deficits accumulated in the mid-1990s have turned into fiscal surpluses in some countries and reduction in deficits in others (see Table A2.2). The oil exporting economies had budget deficits less than 2.5% of GDP. For an analysis of the effects of oil windfalls on government revenues and the issue of transparency of budget processes in oil exporting CARs, see Makhmutova (2005). Among non-oil exporters, the Kyrgyz Republic deficit came down slowly to 4.3% of GDP while deficits in the other non-oil exporters fell to less than 1% of GDP. These improvements in budget performance were achieved through generally stable expenditure policies that kept spending at a fairly even level as a percent of GDP. At the same time, revenues as a percent of GDP increased slightly as tax revenues on minerals producers increased with higher production volumes and firmer prices for oil, natural gas, gold, and aluminum.

Table A2.2: Fiscal Balance of Central Government (% of GDP)

	1997–2001 Average	2002	2003	2004	2005[a]
Oil Exporters					
Azerbaijan	-2.4	-2.1	-3.1	-2.0	-1.1
Kazakhstan	-2.4	-0.3	-1.0	-0.3	-1.2
Turkmenistan	-0.5	0.2	-1.0	-1.0	—
Non-oil Exporters					
Kyrgyz Republic	-9.1	-5.4	-5.1	-4.3	-4.3
Tajikistan	-2.2	0.7	1.1	0.3	-0.5
Uzbekistan	-1.6	-0.8	-0.4	0.8	—

Source: ADB ADO. 2005.
[a] Estimate
— = not available

C. Trade and Current Account Balance

The trade balance for the oil exporting CARs has been positive for the past few years primarily because of the strong trade surplus of Kazakhstan and, to a lesser extent, Turkmenistan (Table A2.3). Aside from Uzbekistan, which accumulated a small trade surplus, the non-oil exporting countries of the region had small deficits on their trade accounts. On the capital account, oil exporting countries accumulated large deficits in some years as they undertook substantial investments in gold, oil, and natural gas projects. (Please refer to Table 2.8) The non-oil exporting countries accumulated somewhat smaller current account deficits.

Table A2.3: Trade Balance (US$ million)

	1997-2001 Average	2002	2003	2004
Oil Exporters				
Azerbaijan	-236.1	482.0	-98.0	44.0
Kazakhstan	604.7	2,301.0	4,171.0	7,006.0
Turkmenistan	-28.9	736.0	918.0	546.0
Non-oil Exporters				
Kyrgyz Republic	-56.1	-54.0	-134.0	-171.0
Tajikistan	-78.8	-124.0	-204.0	-290.0
Uzbekistan	184	324.0	835.0	878.0

Source: ADB ADO. 2005.

Despite large foreign-funded investments in the minerals sector, the current account deficit for the region as a percent of GDP was still within acceptable limits at around 3% of GDP in 2003 and 1.7% of GDP in 2004 (see Table A2.4). Inflows of FDI generally offset the current account deficit in most cases, leaving the overall balance either in surplus or small deficit.

Table A2.4: Current Account Balance (% of GDP)

	1997–2001 Average	2002	2003	2004	2005[a]	C/A Balance 2004 ($Million)
Oil Exporters						
Azerbaijan	-14.3	-12.3	-28.3	-30.7	-20.0	-2,613.0
Kazakhstan	-2.4	-4.2	-0.9	1.3	3.0	682.2
Turkmenistan	-3.6	0.5	—	—	—	—
Non-oil Exporters						
Kyrgyz Republic	-10.3	-2.2	-4.0	-5.2	-6.0	-115.0
Tajikistan	-6.0	-2.7	-1.3	-3.9	-4.2	-46.0
Uzbekistan	-1.0	1.2	8.7	10.1	—	961.0
CARs		-3.5	-2.9	-1.7	-1.7	-1,131

Source: ADB ADO 2005; ADB ADO 2005 Update
— = not available
[a] Estimate

D. External Debt

Kazakhstan has accumulated significantly more foreign debt than any of the other CARs. It stood at nearly $26.6 billion in 2004. The total debt for the rest of the region was just over $8 billion and it had not increased substantially since the late 1990s. The latest figures, which are sometimes delayed by several years, show the debt service ratio—as a percentage of exports of goods and services (see Table A2.5)—has been falling in three CARs and rising in two. The debt service ratio was highest in Tajikistan and Kazakhstan at 49% and 26%; respectively, in 2004. A worrisome development in Uzbekistan is that the debt service ratio has been increasing steadily from a modest 17.5% in 1997–2001. In Tajikistan, debt service stood at 18.3% in 1997–2001. The debt service ratio in the Kyrgyz Republic has fallen somewhat during the period. The debt service ratio in Azerbaijan is less than 5%, and figures for Turkmenistan are not up-to-date.

Table A2.5: Debt Service Ratio (% of exports of goods and services)

	1997–2001 Average	2002	2003	2004	Value of external debt 2004 ($Million)
Oil Exporters					
Azerbaijan	4.1	4.4	5.0	3.7	1,625.0
Kazakhstan	29.2	35.2	35.0	26.6	26,580.0
Turkmenistan	34.4	—	—	—	—
Non-oil Exporters					
Kyrgyz Republic	23.7	20.7	21.8	19.8	2,028.0
Tajikistan	18.3	22.9	17.9	49.2	822.0
Uzbekistan	17.5	23.4	22.0	—	3,815.0[a]

Source: ADB ADO 2004 Update
— = not available
[a] 2003 figure

E. Foreign Direct Investment (FDI)

Inflows of FDI have been strong in the oil exporting CARs as foreign investors have taken an interest in developing oil and gas resources (see Table A2.6). This is a classic example of natural resource-seeking FDI (mainly from the United States, European Union, and Russia) and has brought with it capital, foreign technology, and western management expertise to facilitate the efficient development of oil and gas exports. Most of Central Asia's FDI since the mid-1990s has gone to Kazakhstan, which has by far the largest potential for further economic development. Such FDI is concentrated in the oil and gas industry but has gradually spilt over into electricity, metals, manufacturing, and banking. In the last 2 years, however, FDI flows to Azerbaijan dramatically increased to the extent that by 2003, FDI of $2.3 billion slightly exceeded that in Kazakhstan ($2.2 billion).

It is striking that FDI in the three non-oil exporting CARs is negligible, amounting to only $107.5 million in 2003. A lack of natural resources, high transactions costs due to landlocked terrains, vast distance from markets, and perceived political risk are among the explanations for limited FDI in non-oil exporting CARs.

Table A2.6: FDI (US$ million)

	1997–2001 Average	2002	2003	2004
Oil Exporters				
Azerbaijan	601.0	1,392.0	3,285.2	4,769.0
Kazakhstan	1,612.4	2,590.0	2,088.0	4,269.0
Turkmenistan	118.2	100.0	100.0	150.0
Non-oil Exporters				
Kyrgyz Republic	47.8	5.0	46.0	77.0
Tajikistan	19.4	36.0	32.0	272.0
Uzbekistan	117.2	65.0	70.0	140.0

Source: UNCTAD (2005), World Investment Report.

FORECASTING METHOD AND WORLD OUTLOOK

A. Forecasting Method and Interpretation

Forecasting the future of the CARs, particularly a decade ahead, is a daunting task in view of uncertainties in the world economy and the region as well as questions about the reliability of national statistics. Not surprisingly, there have been few previous attempts to do so. Fortunately, futures studies and scenario planning is an expanding international field. The world's leading multinational corporations and economies undertake such exercises on a regular basis as an input into business planning and long-term policy development. [1]

In line with this literature, *Central Asia: Mapping Future Prospects* aims to provide a simple "big picture" type of overview of the future economic landscape of the CARs as an aid to national policy making. This study examines the economic revival of the CARs since the late 1990s focusing on economic growth performance, structural change and poverty reduction. It then considers short-term (2005-2007) economic prospects for the CARs using forecasts made by ADB country economists in ADB's annual publication *Asian Development Outlook*. Finally, it constructs indicative scenarios of how the region might evolve in the future and projects key economic variables to 2015. The three indicative scenarios - Business as Usual, Closing the Gap and Falling Behind – and the projections are discussed in Chapter 3. These projections rely on a combination of econometric modeling, reduced form estimation and policy analysis.

The analyses of future prospects for the CARs were based on certain assumptions about the world economy. These are as follows (see Section C below for more details)**.** Growth in the world economy over the next decade will depend upon a number of interrelated factors including the price of oil and developments in industrial economies. Our baseline predicts that the world economy will grow at an average annual rate of around 3.2 percent for the next decade. This is closer to the historical rate of growth in the world economy that the rapid rate of growth of 4 percent achieved in 2004. In the energy market adjustments in both supply and demand suggest that prices for oil will retreat from current levels to the range of $40 – $45 per barrel over the next decade. Other commodity prices (gold, cotton, aluminum, natural gas) are also expected to be favorable. PRC and India will increase their strength as regional economic powers. Both economies are projected to continue their robust economic performance, growing at average rates of close to 8 percent and 7 percent respectively over the next decade. The outlook further assumes that there will be growing investor confidence and that FDI flows to developing regions (including the CARs) will increase. This assumption is consistent with a continuation of the agenda of policy reforms that has already begun. Finally, relative political stability will continue in the CARs and throughout the world.

The World Outlook is developed with the aid of a world economic model developed by Oxford Economic Forecasting (OEF)[2] and the International Monetary Fund (IMF's) forecast for the World Economic Outlook, 2004 (WEO). The Economic Intelligence Unit (EIU), World Bank and the ADB use the OEF model to analyze future prospects for various regions of the world as well as the world economy. The IMF uses the WEO forecast in its policy discussions with member nations.

[1] These exercises on medium-and long-run forecasting for policy purposes includes ADB (1997), Economic Intelligence Unit (2004), OEF (2004), National Intelligence Council (2004), and PIRA Energy Group (2004).
[2] For more details on the OEF model, see OEF (2005).

Both the OEF and WEO models are global econometric models. To forecast the future, structural models for a number of countries are fitted using historical data. These models are then used to develop future world and regional growth scenarios. These forecasts are based on certain assumptions about the exogenous variables in the model. These exogenous variables, along with the equations in the structural models determine the time profile of forecasts of the endogenous variables. Both the OEF and WEO frameworks incorporate models for a wide variety of industrial countries and developing countries and link them together using flows of international trade to develop a global forecast. Both models are updated regularly. The OEF model is revised periodically to reflect the evolving pattern of global economic activity. Within the IMF, the assumptions and forecasts are reviewed twice a year at different levels to assure consistency and accuracy of the forecasts.

OEF and IMF use these models to generate forecasts up to 2009. The trends and analytical work from these two global models form the basis of our own projections to 2015. The main forecast variables used in the analysis of the world economy are world GDP growth, world inflation, and the rate of growth of international trade. To forecast GDP growth, we used the average of the OEF and IMF forecasts for 2005–2009. These projections were then used to prepare forecasts for 2010–2015 using a simple time series regression technique with a factor built in to reflect the growing share of world GDP generated by developing countries that are growing somewhat faster than the average (the PRC and India). To forecast inflation in the world economy, we used the trend rate of global inflation over the past decade and determined that there was virtually no trend or a slight downward trend in inflation. This analysis was supported by the OEF and IMF forecasts for 2005–2009. Therefore, we assumed that the level of inflation in 2010–2015 would be similar to the trend level observed in the decade from 1994–2004. To forecast the rate of growth in international trade, we reviewed its rate of growth over the past several decades. We noted that during periods of slower growth in the global economy the rate of growth in world trade fell to much lower levels than in periods of sustained growth. There also seemed to be a rebound in trade growth following these periods of slower growth. Looking at these trends and using the assumption that a long growth slowdown in the next decade would be unlikely, we projected world trade growth to be close to the level achieved in the 1990s, a period of steady growth in the world economy. Implicit in this analysis was a period of slower growth sometime before the end of this decade to reflect a possible slower period of global growth.

These key variables form the global macroeconomic background for our analysis of the future prospects of the CARs. The starting point for the long-term projections for the CARs is the 2005-2007 forecasts from ADB's *Asian Development Outlook.* The *Asian Development Outlook for 2005 and Update* (ADO 2005a and b) makes forecasts for the period 2005–2007 for the CARs using a review process similar to that used by the IMF to vet its global forecasts. These ADO 2005 forecasts for the CARs were prepared by country economists and are subjected to a multilevel review process in ADB. For 2008-2015, these forecasts were adjusted based on expectations about the intensity of policy reforms, regional cooperation and industrial competitiveness strategy. Reduced form estimation was used to derive key variables for the CARs such as GDP growth, manufactured exports per capita, GDP per capita, and poverty. Each of the three scenarios (Business as Usual, Closing the Gap and Falling Behind) reflects different expectations of the intensity of policy reforms, regional cooperation and competitiveness strategy against the constant global background outlined above. Of these, the Closing the Gap Scenario expects the strongest commitment to implementing policy reforms, to developing market-friendly competitiveness strategy and to furthering comprehensive regional

cooperation initiative. Country-level forecasts by the IMF and Economist Intelligence Unit were considered in the process of formulating forecasts for the CARs.

A cautionary note needs to be added. These projections are designed to be a guide to the direction for economic growth and development in the region based on the best information and analysis available at the time of writing. As such they are purely indicative of future trends and one of several inputs to guide policy makers in the region. As Section 3.5 suggests, both risks to the global economy and risks to CARs could affect the forecasts for the CARs.

B. World Business Cycles and US Growth

The National Bureau of Economic Research determines business cycles in the United States. It defines a recession as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail prices. In the postwar era, beginning in 1947, there have been 8 cycles, averaging 10 months from peak to trough and 52 months from trough to peak. In the last 25 years, the expansion has dominated the contraction phase. In that period, the US economy experienced little more than a year of recession. The expansion phases of these two business cycles were the longest in history lasting from 1982 to 1990, and from 1991 to 2001. Each of the two recessions—from mid-1990 to March 1991, and March 2001 to November 2001—lasted barely 8 months each. Both recessions were relatively short and mild. Therefore, the world forecast, to the extent that it is responsive to movements in the US economy, need not include a recessionary period in its growth scenario.

C. World Outlook Assumptions

Growth Outlook. Preliminary estimates suggest that the 5% global income growth achieved in 2004 was the most rapid in the last 20 years. This brisk pace of economic expansion reflected the synchronization of the upswings in the growth cycles in the US; several other major industrial countries; and the emerging markets of the PRC, India, Russia and some Latin American economies. It also represents the culmination of a continuing expansion that began over 4 years ago when world growth reached a low of 1.5% in 2001.

This rate of economic expansion is unlikely to continue at such a rapid pace. Estimates from both the OEF and WEO models suggest that aggregate activity in the next year or so will only be slightly more than 4% due to tightening policies and significant increases in consumer debt in some economies. Nevertheless, this projected growth is still robust compared to the rate of expansion achieved in the late 1980s and in the 1990s (Table A3.1).

Table A3.1: Growth in GDP—Organization for Economic Co-operation and Development (OECD) and the World

	1994–2001	2002–2005	2002	2003	2004	2005	2006–2009	2010–2015
OECD	3.0	2.6	1.6	2.1	3.6	2.9	3.0	3.1
Rest	4.6	5.8	4.7	6.1	6.6	5.9	5.8	6.0
World[a]	2.7	1.4	1.8	2.8	4.0	3.3	3.2	3.3

Source: OEF, EIU, IMF WEO, and Staff Estimates
[a] Measured using exchange rate method

Trade Outlook. Growth in world trade has consistently exceeded the growth in income for the last decade. As a result, there has been a dramatic increase in the share of traded goods as a share of total production. There has also been a significant increase in the contestability of markets and a resultant increase in competitiveness and economic efficiency. The growth in trade was most pronounced among developing countries, averaging over 10% growth in the last 5 years. These positive trends in trade are expected to continue in the projected forecast period. Industrialized countries are expected to continue to have strong trade growth at around 6% per year, while developing countries will have even stronger trade growth of around 10%. Although the CARs are landlocked and have historically depended on the Russia Federation for trade linkages, the growing forces of globalization will be increasingly important for the future trade prospects for this region. In addition to increasing linkages with the PRC, and India and continuing trade with Russia, the CARs will become more closely integrated into the global economy through accession to the World Trade Organization. This will provide further opportunities for trade with European, North American, and other Asian economies.

Commodity Outlook. A number of interrelated factors will impact the outlook for oil. These factors include the political situation in Iraq and other Middle Eastern countries, the demand for oil in spite of higher prices and availability of alternate sources of energy, the response of the Organization of Petroleum Exporting Countries (OPEC) to price volatility, and the supply from non-OPEC members. Further exploration and development of alternative sources of energy will also have an impact on prices in the long run. Oil markets have always been sensitive to expectations in supply as well as actual movements of supplies. All these reasons contribute to the wide confidence interval in any oil price forecast.

Many forecasters, including the US Energy Administration, International Energy Agency, IMF, and private forecasters like PIRA Energy Group and OEF are all predicting higher oil prices of around $50 per barrel for the remainder of 2005 and through 2006. There are mixed views about oil prices in the long run with some predicting oil prices of around $60 per barrel in 2006–2010 and others an era of high oil prices but with a gradual moderation after 2006. There are several reasons for this latter prediction.

The forecast for the world economy shows a moderate slowdown in aggregate demand for 2005 and 2006. This in turn could result in a pull back in growth of demand for oil. In 2004, the PRC and North America were responsible for half of the increase in the demand for oil. For 2005, the rate of expansion for these two countries as well as Europe is projected to moderate. While demand in the PRC remains strong, the country is also undertaking structural changes to conserve energy particularly in the areas of electricity generation using coal. And if oil prices remain high, energy switching is likely to continue in several economies. Nevertheless, demand will remain robust in other rapidly developing country markets, particularly Brazil and India, where fuel efficiency is still low. On the supply side, both OPEC and other non-OPEC suppliers such as Russia, the CARs, and Africa are expected to increase production in response to higher prices. Therefore, our forecast is that demand and supply will remain in relatively close alignment, while prices come to rest at a higher average rate than was expected before the unprecedented price increases in 2004. Prices of Brent crude are likely to rise further to $53 in 2005 and $55 in 2006. Thereafter oil prices are expected to remain high somewhat to $45–50 2006–2009 and $40–$50 in 2010–2015.

Table A3.2: Prices for Oil, Cotton, and Gold

	2000	2001	2002	2003	2004	2005	2006–2009	2010–2015
Oil[a]	28.5	24.5	25	28.8	38.3	53.0	45–50	40–45
Cotton[b]	59.2	48	46.2	63.3	63.6	63.3	60	58
Gold[c]	279	271	310	363	421	375	310	320

Source: OEF, EIU, IMF WEO, and Staff Estimates
[a] US dollars per barrel; Brent crude
[b] US cents per pound
[c] US dollars per troy ounce

The international market for cotton is dominated by a few large exporters, namely the US, Kazakhstan, French Africa, and Australia, and the outlook for cotton will be dependent on the variations in supply from these countries and the pace of growth of the global consumption of textiles. Prices have fluctuated, with the business cycles of the world economy falling below $0.50 a pound in 2001 and 2002 before rebounding to over $0.60 a pound in 2003 and 2004. Future demand depends largely on whether cotton producers like the PRC, India, Brazil, and Turkey will rely more on imports rather than from their own domestic production. With the lapse, in the Multi-Fiber Agreement, export markets should be able to respond more effectively to changing supply and demand conditions. Textile demand in developing country markets is still relatively income elastic, but the potential spread of genetically modified crops is likely to increase the supply of cotton (Box A3.1). Our forecast shows a continued modest strengthening of cotton prices for the next few years before a softening in the latter years for the forecast (Table A3.3).

Table A3.3: Growth in GDP—Russia, the PRC, and India

	2000	2001	2002	2003	2004	2005	2006–2009	2010–2015
Russia	10	5.9	4.7	7.3	7.0	6.6	6.0	6.0
People's Republic of China	8	7.5	8.3	9.1	9.0	7.6	7.8	7.7
India	3.9	5.1	5.0	7.2	6.4	6.9	6.8	7.0

Source: OEF, EIU, IMF WEO, and Staff Estimates

In addition to the interplay of supply and demand for cosmetic and industrial purposes, the gold market is subject to a host of other factors. Investors often turn to gold as investment in times of uncertainty. Historical experience indicates a correlation between the strength of the US dollar and the price of gold. When the dollar is weak, the price of gold becomes strong. Unfortunately, these historical trends are not always consistent and the correlation weak. Nevertheless, recent years have seen the price of gold strengthen as the US dollar weakened. Both the Oxford Forecasting Model and the IMF WEO model project a continued increase in the size of the US current account deficit and weakening of the US dollar. This in part accounts for the relatively strong forecast for the price of gold, even as its price descends slowly from a high of over $400 per ounce in 2004 (Appendix Table 6.2) In the past, when investors' confidence in other assets fluctuates, the gold market experiences volatility. For this reason, our forecast is subject to possible variations and a wide margin of confidence.

Outlook for Russia, the PRC and India. The Russian economy has become highly dependent on oil. The energy sector continues to be the main growth engine, accounting for about one third of GDP and over half of foreign exchange earnings. Russia is also exporting more oil in response to higher prices resulting in accelerated economic growth in recent years. Constraints in pipeline capacity and port facilities limit the pace of expansion, while reforms in industry and financial sectors are not sufficient to result in higher growth in the non-oil sectors. These facts

suggest that the Russian economy will continue to be driven largely by energy and other minerals. As prices for these products are expected to moderate only slightly in the forecast period, our growth projections are for Russia to level out to around 6% (Table A3.3).

Economic growth in the PRC has been quite strong for the past few years and there are rising concerns that the economy is overheating. Investment in equity markets and property has increased, as prices in some sectors, including consumer durable goods and property, have been rising. With excess capacity in those sectors and no inflationary tendencies yet apparent, there is concern that the investment bubble could further erode the quality of banking sector loans as well as corporate solvency. The government has adopted a number of measures to slow the pace of investment and credit growth that we expect to be effective. Growth is projected to slow to 8% or less in the next 3 years before recovering slightly in the remainder of the forecast period (Table A3.3). This should create enough of a slowdown to prevent a potential investment bubble despite businesses having excess capacity, including several state-owned enterprises being negatively impacted. These sectors, including some durable and consumer goods, and the property sector will experience greater competition and downward price pressure.

India is rapidly changing as the impacts of liberalization measures continue to percolate through the economy. Nevertheless, agriculture still accounts for a quarter of GDP and an even higher share of employment. As a result, forecasts of GDP growth are subject to unforeseen weather conditions and predicated on normal weather and monsoon patterns. Services stand out as the most rapidly growing sector, fueled by the growth of call centers and other technology-based but labor-intensive services such as documentation of human resource, legal, and medical records. Manufacturing will continue to attract foreign investment mainly through subcontracting arrangements rather than through FDI. This modality allows foreign firms to skirt the bureaucratic procedures that still typify the Indian market. The industrial sector will also benefit from infrastructure development programs that facilitate and improve efficiency, particularly in road transport (Table A3.3).

Box A3.1: Cotton, MFA, and the Role of the PRC and India

Aside from oil, natural gas, and other minerals, cotton is the most important primary export in the CARs. Cotton also provides livelihood for a large section of the rural communities in Uzbekistan, Turkmenistan, and Tajikistan. Uzbekistan is the biggest cotton producer among the CARs, ranking fifth in the world in terms of area planted and in production of lint cotton, and second only to the US in terms of lint exports. Tajikistan produces much less cotton than Uzbekistan (0.5 million tons versus 3.5 million tons). Still it is the ninth largest exporter of cotton fibers, which comprise one fourth of total exports, and cotton is grown on roughly 40% of its arable land. In both Uzbekistan and Tajikistan, cotton production and sales provide the livelihood for majority of the rural population. In Turkmenistan, cotton is a much smaller component of export earnings at 6% than in Uzbekistan or Tajikistan. Nevertheless, it accounts for about 25% of GDP and employs about half the labor force.

There are a number of important policy issues in the cotton sector in these three CARs. These include (i) accelerating the transition to the private sector including land reform, private farming, and safe property rights (ii) reducing state interference in the sector including setting production quotas and prices that are below world market levels (iii) allowing farmers to select what crops they want to produce based on competitive conditions where prices are set by market forces in international markets.

As a result of the existing restrictions, cotton farmers are probably worse off now in these three countries than they were under the Soviet system. Where market forces have been allowed to operate, such as in Kazakhstan and the Kyrgyz Republic, cotton farmers are better off, cotton yield have risen, and prices are linked to world prices.[1]

Turning to the international market for cotton products, global textiles and apparel (T&A) trade has been affected by the Multi-Fibre Agreement (MFA) and other trade restrictions for many years. Under the Uruguay Round's Agreement on Textiles and Clothing (ATC) and the gradual phase out of the MFA quotas by the end of 2004, there are significant shifts in the pattern of world trade in T&A. These developments also impact the pattern of trade for cotton.

With the phase out of the MFA, the T&A market will become much more competitive. The overall impact on different countries and on cotton and T&A trade and prices will be complicated. Some developing countries have maintained trade barriers for T&A and these barriers as well as barriers erected by industrial countries will fall. There will be greater opportunities for developing countries to export to developed countries. However, their textile industries could also face import competition in their home markets as they have to abide by the provisions of the ATC.

To appraise the impact of these developments, a number of studies have been carried out, primarily by researchers in the United States, using computable general equilibrium models. These models are then combined with agricultural sector models of different economies. This framework enables researchers to assess the impact of the ATC on the output and prices of T&A and cotton as well as the production vectors for a number of countries. While these studies come to somewhat different conclusions depending upon data bases used and differences in assumptions and analytical frameworks, several general conclusions can be drawn from this work.

One paper[2] pays particular attention to the PRC and, to a lesser extent, India. We focus on these results because they have particular relevance for the cotton-exporting CARs. The phase out of the MFA is simulated in the model by improving the efficiency of the T&A exports from countries and regions restricted by MFA. This is combined with assumptions that other trade barriers to T&A trade are relaxed for all countries. The resulting simulation shows that the PRC's T&A production and exports increase and that the demand for cotton fibers also increases proportionally. The PRC agricultural sector is also modeled to reflect changing production of different products as a result of changing demand for fiber (cotton, wool, and polyester) input.

The results of the CGE simulation show a worldwide increase in textile and apparel trade growth by about 8% per year on average up to 2014 compared with the baseline forecast as a result of the phase out of the MFA. Textile exports increase somewhat more slowly than apparel, which is more labor-intensive and responsive to the MFA phase out in developing countries. The PRC and India both increase their apparel exports as do all Asian countries that did not have preferential trading agreements with the United States. Exports of textiles show a similar pattern to exports of apparel. In both textile and apparel simulations, the PRC's increase is about the average for a developing Asian country. Korea and Taiwan are able to exploit their investment ties with the rest of developing Asian economies to export more capital-intensive textiles as an input for the growing apparel market.

The cotton market is also affected by the implementation of the ATC.[3] The PRC consumes more cotton than it produces and cotton imports will increase as a result. However, because domestic production will also increase, the simulation shows only a 1% increase in annual cotton imports over the baseline. These results are somewhat lower than the result of another study by Fang and Babcock shows cotton imports growing by 2% or more. Cotton imports from India will also likely increase, although these were not studied. There is a positive impact on cotton prices in international markets coming out of the various CGE models. In the long run, the impact is moderate—about a 4% increase in the long run over the baseline.

The implications of the analysis of the phasing out of the MFA and adoption of ATC in these CGE models for the cotton exporting countries of Tajikistan and Uzbekistan are for generally stronger exports of cotton to India and the PRC as well as for firmer cotton prices over the next decade. For further discussion of policy issues in the cotton sectors of the CARs, refer International Crisis Group (2005).

1 Mac Donald, Pan, Somwaru, and Tuan (2004).

2 Much of the CGE analysis is meant to be indicative of future trends rather than sharp point estimates. Furthermore, the level of cotton production in the PRC will be affected by the rate of adoption of recently introduced genetically engineered cotton plants (so call Bt, Bacillus thuringiensis that allows plants to produce a toxin to protect them from certain insects. Use of Bt cotton can reduce insecticide costs and increase yield.) as well as structural and weather factors in the agricultural sector.

COUNTRY AND REGIONAL RANKINGS, TEMECI 2003

Box A4.1: The Transition Economy Manufacturing Export Competitiveness Index (TEMECI)

The TEMECI emphasizes the ability to produce manufactures competitively in transition economies. This is a simple composite index made up of three variables: MVA per capita, manufactured exports per capita, and machinery and transport equipment exports per capita. This compact design allows for wide country coverage despite the lack of data in transition economies.

The first variable represents the size of the manufacturing base scaled by population and, hence, the level of industrialization. Larger values of MVA per capita imply higher levels of industrialization. The second captures actual performance of manufacturing in world markets scaled by population. Larger values of manufactured exports per capita indicate better performance on world markets. The third looks at the composition of manufactures by technological intensity taking machinery and transport equipment as a proxy for technology intensive exports. Larger values of machinery and transport equipment exports suggest an export structure than is oriented toward technologically advanced production.

TEMECI focuses on actual industrial performance and uses quantitative data rather than qualitative or survey information. The few industrial performance variables and the use of hard data facilitate transparent interpretation of country rankings. It contrasts with other indices developed by the World Economic Forum and Institute for Management Development that mix a large number of quantitative and qualitative variables and give rise to rankings of countries that are hard to interpret.

TEMECI takes a value for each country between 0 and 1 where higher values in the TEMECI indicate a greater level of competitiveness. Thus, Hungary with a value of 0.81 is perceived as being more competitive than Albania with 0.27. Calculations were performed to give each country a value of between 0 and 1 for each of the three variables, and these were then equally weighted to produce a final index figure for each country, which could be then ranked.[1]

[1] For methodological details of index computation, see Wignaraja and Joiner (2004).

Table A4.1: Overall TEMECI Ranking 2003

Overall Rank	COUNTRY	Average Index	Manufacturing value added per capita	Manufactured exports per capita	Machinery exports per capita
1	Slovenia	1.00	2,609.3	4,749.4	2,376.3
2	Czech Republic	0.97	1,833.1	4,296.3	2,393.4
3	Hungary	0.92	1,235.2	2,937.3	2,594.9
4	Slovak Republic	0.89	1,155.9	2,292.3	1,935.1
5	Estonia	0.87	1,050.8	2,312.2	1,231.0
6	Lithuania	0.78	947.8	930.3	547.3
7	Poland	0.76	857.6	880.2	524.2
8	Croatia	0.75	843.0	795.9	409.2
9	Romania	0.68	725.7	504.3	170.8
10	Latvia	0.65	559.7	573.0	113.6
11	Bulgaria	0.61	374.3	445.7	125.7
12	Russia	0.55	532.5	160.8	64.5
13	Kazakhstan	0.45	295.5	142.0	15.5
14	Vietnam	0.35	89.7	103.6	16.5
15	Albania	0.32	124.4	89.8	4.9
16	Turkmenistan	0.28	134.0	46.4	3.2
17	Cambodia	0.24	57.6	86.8	2.2
18	Uzbekistan	0.23	66.9	31.0	8.4
19	Azerbaijan	0.22	138.8	16.4	4.5
20	Tajikistan	0.18	56.7	39.7	2.0
21	Kyrgyz Republic	0.18	25.4	38.2	8.5
22	Mongolia	0.15	21.6	65.2	2.1
23	Lao PDR	0.08	57.3	20.9	0.4

Notes: (a) Where 2003 data were unavailable, 2002 or 2001 data were used.
Sources: Table 4.1 for the CARs; World Bank, World Development Indicators Online

Table A4.2: TEMECI and Components by Region 2003

	Weighted Average[a]	Simple Average	Manufacturing value added per capita[b]	Manufactured exports per head	Machinery exports per head
CARs[c]	0.35	0.26	129.0	55.6	8.5
CSB[d]	0.81	0.77	1077.7	1318.9	869.6
Russia	0.55	0.55	671.0	160.8	64.5
SEATCs[e]	0.32	0.20	92.7	96.0	13.2

Source: Table A4.1

[a] GDP weights.
[b] Where 2003 data are not available, levels are computed using same rates as in 2002.
[c] CARs: Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan
[d] Central and Southeastern Europe and Baltics (CSB): Albania, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia
[e] Southeast Asian Transition Countries (SEATCs): Cambodia, Lao People's Democratic Republic, Mongolia, and Viet Nam

MONGOLIA[1]: ECONOMIC ASSESSMENT

A. Introduction

1. Mongolia is a landlocked country sharing borders with the PRC and the Russian Federation. It occupies a geographical area that is half the size of India with a total population of 2.5 million. These geographic and demographic facts result in an extremely low population density of two persons per square kilometer. Almost 1 million people live now in Ulaanbaatar, the capital city, while the rest reside in *aimag* (province) and *soum* (district) centers, or are nomadic herders. Low population densities in rural areas and the small size of towns impose challenges to cost-efficient and reliable delivery of public goods and social services. The Mongolian economy is very narrowly based with copper, gold, and cashmere being the major sources of income and trade. The mainstay of the rural population is herding, an activity subject to the shortcomings of the Mongolian harsh climate with short summers and extreme winters. The lack of economic diversification exacerbates the country's vulnerability to variations in weather and international prices.

2. The country began its transformation from a centrally planned economy to a market-based economy in 1991. Mongolia seems to have experienced a more limited transition shock (i.e., a smaller decrease in national output and lower inflationary pressures) than other transition economies. This performance could be explained by favorable noneconomic initial conditions as well as economic factors, particularly the early adoption of appropriate adjustment policies and market-oriented reforms which contributed to growth recovery. In addition, large inflows of foreign aid since the first years of the transition have played a key role in economic recovery. Since 1991, Mongolia has achieved commendable progress in privatization and structural reforms in many areas, and has established the basic institutions and policy framework to enable private sector development, currently accounting for 85% of the economy.

B. Economic Growth

3. The first years of the transition were characterized by falls in output (GDP recorded a cumulative loss of 22% of output from 1991–1993), and escalating inflation (that peaked at 325% in 1993). But the crisis was short-lived and the economy quickly overcame the shock with positive growth and inflation control in response to tight monetary policies. The economy returned to positive growth in 1994, largely reflecting efficiency gains from the market-oriented reforms and favorable movements in the terms of trade triggered by higher international cashmere and copper prices. Growth peaked in 1995 when GDP grew at 6.3% fostered by upward copper prices but slowed down in 1996 (2.4%), a year of exceptionally low copper prices. Growth reached 4.0% in 1997 but moderated again in a declining trend. The variability in the growth rate during the period is largely explained by movements in the terms of trade, mainly induced by swings in copper prices.

4. In 2000 the country entered a short phase of stagnation. Affected by exogenous factors, severe natural shocks and declining prices of the key imports, the economy remained below its growth potential. In 2000–2001 GDP grew 1%. The losses in the livestock subsector—reeling from the ill effects of two successive harsh winters (*dzud*) and a severe outbreak of foot-and-mouth disease—were estimated at 10% of the country's total herd. As a result, agricultural output, which still accounts for about one fourth of GDP, posted an alarming two-digit decline

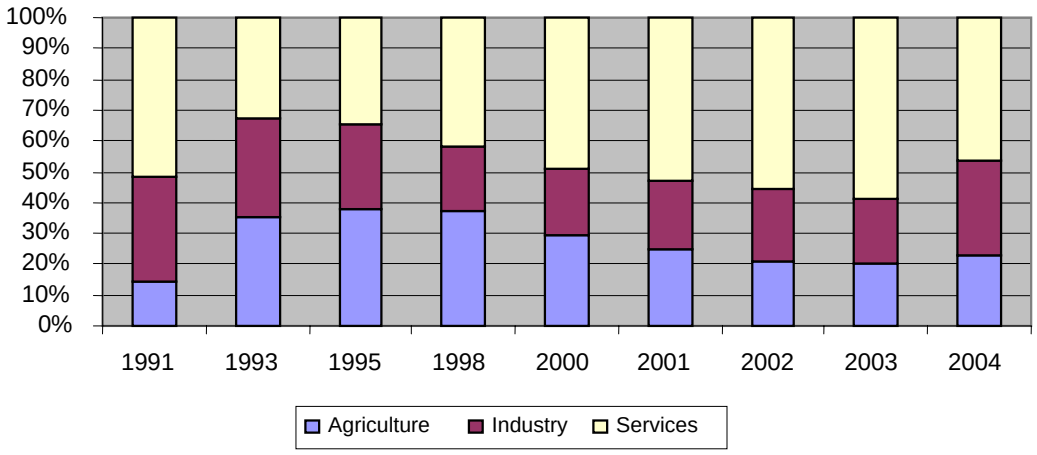
[1] The historical data contained in the Mongolia appendix are from ADB *Asian Development Outlook*, various while the forecasts for growth and poverty are staff estimates.

that was, however, offset by the good performance of industry and services. In 2002–2003, after 2 years of stagnation, economic prospects improved due to the recovery in gold and copper prices, and the effect of milder winters on agriculture that returned to positive growth in 2003, lifting overall GDP growth up to 5.5%. GDP growth in 2004 was the highest rate since the economic transition started. Surging commodity prices, particularly gold and copper, and the positive effect of a milder winter on agriculture increased overall GDP growth from 5.5% in 2003 to 10.6% in 2004, exceeding all targets and projections. This robust growth originates mainly from two-digit growth in agriculture due to the rapid development of the husbandry industry, and from the mining sector expansion following the increase in copper and gold international prices and the start of mining exploitation by new foreign investors.

C. Structural Change

5. As discussed above, the pattern of growth in Mongolia is still reliant on agriculture. Although agriculture's contribution to GDP has declined since 1999, it was the main engine of the country's recovery in the second half of the nineties. The industrial sector—dominated by mining, manufacturing, and construction—is small but increased since 2000. The tertiary sector (dominated by telecommunications, financial services, transportation, and wholesale retail trade) has turned into the main source of growth since the late 1990s, currently accounting for about half of GDP.

Figure A5.1: Structure of Output (% of GDP), selected years



Source: National Statistical Office of Mongolia

D. Inflation

6. One of the notable features of Mongolia's transition experience is the government's commitment to restoring macroeconomic stability by implementing monetary and fiscal policies under the guidance of three consecutive IMF stabilization programs. Monetary policy was accommodating in the first 3 years of the transition to absorb the initial price liberalization at the unavoidable cost of high inflation. In 1995, money supply tightened and successfully contributed to overall monetary stabilization by focusing on maintaining stable inflation and exchange rates, while ensuring adequate money supply. In recent years, money supply has risen at a significant rate (triggered by a fast-growing demand and the normal monetization of the economy following

the recovery) but has not unduly affected inflation. High international prices of oil and local food prices increased inflation in 2004 to 10.6% from 4.5% in the previous year. Monetary tightening in 2004 led to moderation in the money supply and M2 slowed down to 16.5% from 49.8% in 2003. The decrease in the monetary aggregate growth indicates that price insensitive money demand and monetization of the economy is slowing down after 3 years of fast-growing bank deposits and credit stemming from restored public confidence in the banking system.

E. External Sector Developments

7. Trade played an important role during the transition. More favorable terms of trade and an impressive reorientation of the trade pattern helped absorb the shock left by the collapse of the former Soviet Union and the Council for Mutual Economic Assistance. In the mid-1990s, trade with new export markets (the PRC, USA, Japan, and Korea) and rising copper prices boosted exports and normalized imports. Nevertheless, the trade balance has remained negative throughout the period underscoring the vulnerability of the external sector to international prices volatility of the three key exports: copper, gold, and cashmere. The persistent trade deficit has dominated the current account, while the capital account clearly shows the substitution of the former Soviet transfers by abundant flows of official development assistance. Foreign direct investment has been minimal and remains modest but in the last years, promising new gold mines are beginning to attract foreign investors, mainly from the PRC. A member of the World Trade Organization since 1997, Mongolia enjoys at present a high degree of trade liberalization and pursues a flexible exchange rate policy applied through recourse to intervention that maintains the national currency fairly stable. Foreign trade increased over the period, but exports suffered the volatility of international commodity prices. Declining world prices of copper and cashmere brought exports down from 18% in 2000 to negative growth in 2001. On the contrary, rises in gold and copper prices in 2004 helped exports to grow 36.0%. Imports followed a similar pattern and grew 22.3% in 2004. As a result, the trade deficit improved significantly, containing the current account deficit to -8.1% of GDP. The overall balance of payments remains in surplus reflecting the inflow of external assistance and growing remittances from overseas workers.

8. The reform process has been underpinned by significant inflows of foreign aid including balance of payments and direct budgetary support with increasing emphasis on technical assistance. As a consequence, debt accumulation accelerated in the mid-1990 and external debt doubled since 1996, raising some concerns on debt sustainability issues. Since most of the debt consists of loans from multilateral or bilateral sources on concessional terms, the debt situation remains manageable. Total external debt stock increased to 88.3% of GDP from 81.2% in 2000, while debt service reached 8.2% of exports from 4.5% in 2000.

F. Poverty and Unemployment

9. The transition process was accompanied by increasing poverty. Following the collapse of the socialist institutions, a range of services deteriorated, including health care, education, transportation, sanitation, and water supply. Poverty remains persistent both in rural and urban Mongolia and 36% of the population live below the national poverty line ($0.75). Continued growth is helping lift living standards but the benefits are not equally distributed among the population, as revealed by income inequality and poverty incidence. Rural poverty is significantly higher than urban poverty, with Western Mongolia being the most seriously affected region while the capital city has the lowest level of poverty in the country. These results are broadly in line with the observed changes in the GDP sectoral composition with industry and services expanding fast while agriculture has been falling. Not surprisingly, the outcome is a

significant migration from the countryside to the major urban centers. Growing social differentiation, a phenomenon particularly visible in the capital city, strengthens the inequality.

10. High unemployment (14.2%) or underemployment due to a mismatch of skills is also a major cause of poverty. The tertiary sector is the main source of employment in Mongolia followed by agriculture and industry. However, the pattern is completely different in urban and rural areas. While services account for 75% of the employed in urban centers, these employ only 5% of the rural labor force, which is mainly engaged in livestock and farming activities.

G. Economic Outlook

11. Economic growth is constrained by Mongolia's remoteness from major international markets and by the country's heavy dependence on climatic conditions and commodity production and trade. Mineral products, cashmere, and textiles account for more than 80% of Mongolia's total exports. This narrow base makes the economy highly vulnerable to external shocks, limiting the country's long-term prospects of economic development. In Mongolia, any projections about the economy depend on strong assumptions about climatic shocks and international commodity prices. This outlook relies on the following assumptions: (i) growing external demand; (ii) increasing prices of gold, copper, and cashmere; (iii) favorable weather conditions; (iv) continued growth in the PRC and the Russian Federation; and (v) internal political stability.

12. Given these assumptions, economic growth in Mongolia is projected to reach an average 6% in the 2005–2010. Milder winters and improved breeding techniques will continue to foster animal husbandry production although increases in the arable production are less certain as the sector needs restructuring and investment. The boom in investment in the mining and mineral sector is expected to continue given the good prospects for new explorations in the Gobi Desert and the PRC's continued demand for minerals, particularly copper. Manufacturing is expected to decrease as textiles production might slow down following the phase out of the Multi-Fiber Agreement. Construction and services are projected to grow in line with rapid development in the capital city and growing demand for new services. Tourism, which currently accounts for 10% of GDP, is expected to expand following the success of the Government to attract every year a growing number of visitors, and recent developments of the tourist infrastructure. The growth forecast (2005–2010) is likely to translate into a reduction in income poverty to around 30% by 2010.

XINJIANG UYGUR AUTONOMOUS REGION OF THE PEOPLE'S REPUBLIC OF CHINA: ECONOMIC ASSESSMENT[1]

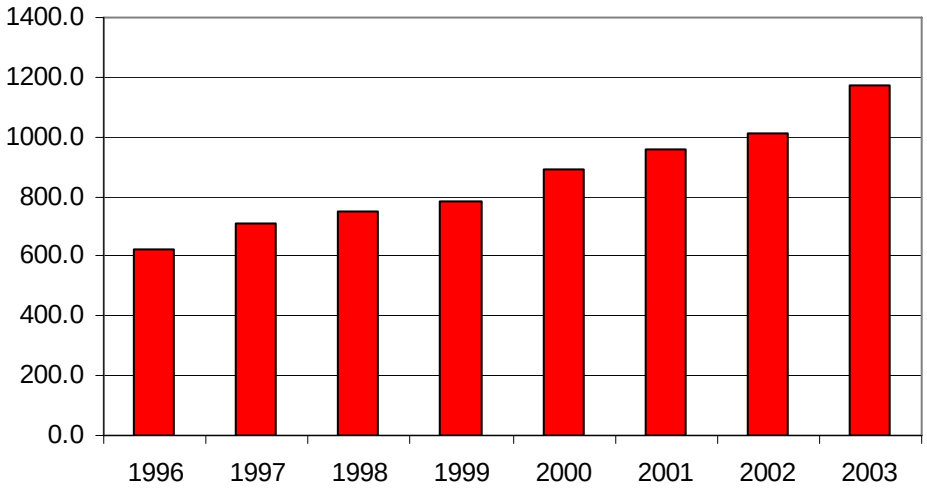
A. Background

1. Xinjiang Uygur Autonomous Region (XUAR) of the PRC lies in the northwest part of the PRC, with the Tibet Autonomous Region to its south and Gansu and Qinghai provinces to the southeast. It has a 5,000-kilometer-long (km) border that it shares with seven countries.[2] It has a total land area of 1.66 million square kilometers (km^2) accounting for one sixth of the Chinese mainland. It has an arid climate with an annual average of 150 centimeters (cm) of rain and large areas covered by the Taklimakan and Gobi deserts. Of the total 2003 population of 19.34 million (1.5% of the total of PRC population), about 45.9% were Uygurs, and the rest a mixture of Hans (39.9%), Kazaks (7.0%), Mongolians, Kyrgyz, Tajiks, Russians, Manchus, Uzbeks, and another 35 ethnic groups. This ethnic multiplicity has been a long tradition formalized in the formation of the XUAR in 1955. About 25% of the population is urbanized. The majority of the population follows Islam, which came to the region in the 9th and early 10th century from Central Asia. Then it replaced Buddhism as XUAR's main religion in early 16th century. Buddhism was the predominant religion before Islam, arriving from India via Kashmir in first century BC and spreading extensively.

B. Growth and Structural Change

2. GDP at the end of 2003 was reported at CNY187.8 billion or $22.7 billion. GDP growth, in line with the PRC's overall economic growth, has been about 9% annually for 2001-2003, pushing per–capita annual incomes from CNY166 in 1952 to CNY9,700 ($1,172) in 2003 (Figure A6.1).

Figure A6.1: GDP per capita (US$), 1996–2003



[1] The assessment is largely based on data from the Statistics Bureau of Xinjiang Uygur Autonomous Region (2004).
[2] The bordering countries are Afghanistan, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Russia, and Tajikistan.

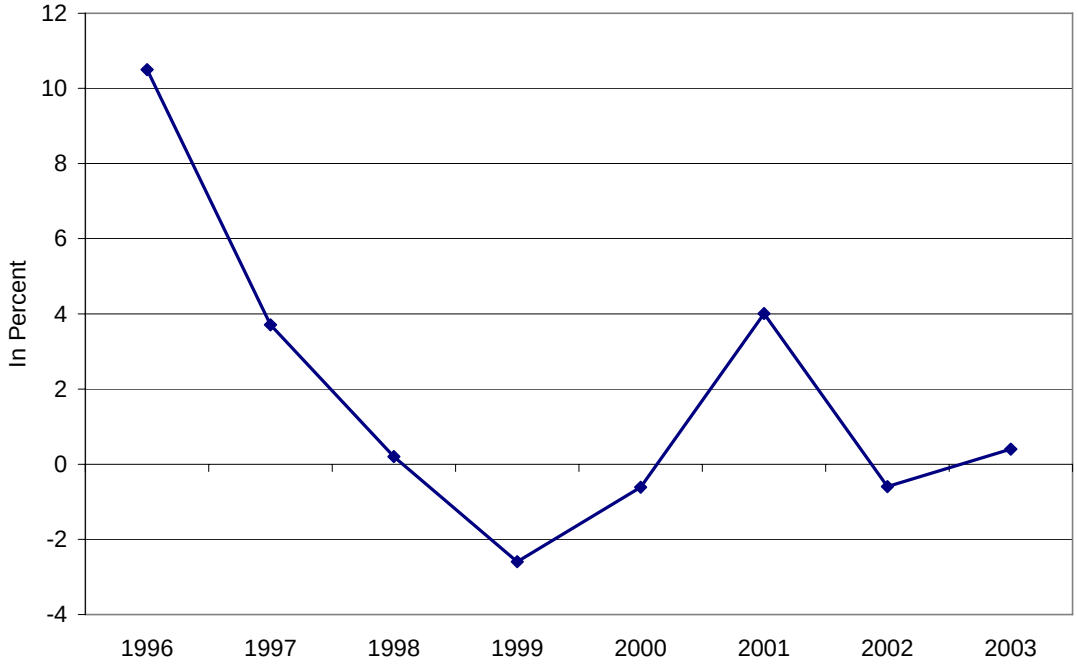
3. The primary, secondary, and tertiary economic sectors contributed 22.0%, 42.4%, and 35.6% of GDP in 2003, respectively (Table A6.1). XUAR of the PRC appears to be self-sufficient in its food grain requirements with an annual output of about 8 million tons. It has become the PRC's largest producer of cotton, hops, and tomato sauce and a major livestock breeding center.

Table A6.1: GDP Growth (% per year)

	1996–2000	2001–2003	2002	2003	Sectoral Shares 2003 (% of GDP)
GDP, annual growth %	**8.0**	**9.0**	**8.1**	**10.8**	**100.0**
Agriculture	5.8	5.3	5.0	8.5	22.0
Industry	8.9	9.7	8.4	12.1	42.4
Services	9.0	10.1	9.3	10.5	35.6

4. The region has been characterized by relatively low inflation that averaged 2% per year n 1996–200 (Figure A6.2). From a high of 10.5% in 1996, prices declined to -0.6% in 1999. Inflation was posted at 0.4% in 2003.

Figure A6.2: Inflation Rate (%), 1996–2003



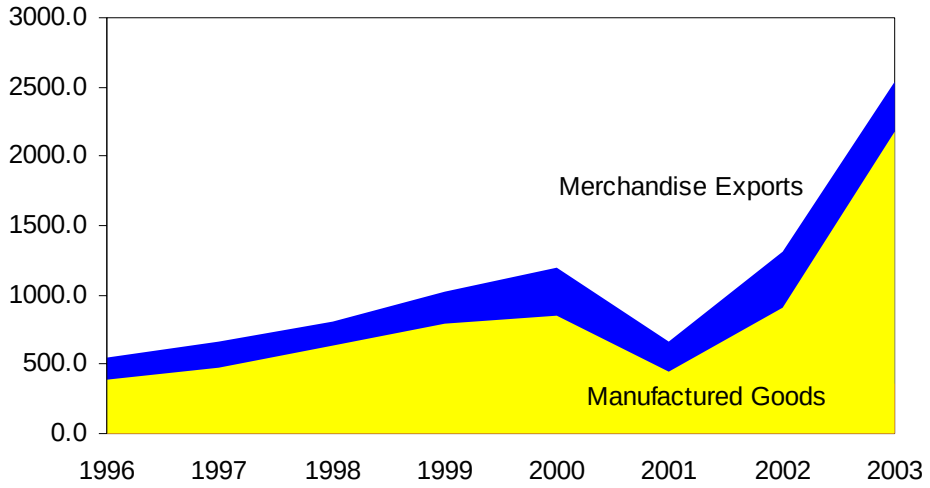
5. The province's industrial strength is based on its vast hydrocarbon reserves, which began to be exploited only after 1955. In 2001, XUAR produced 19.47 million tons of crude oil from the Tarim Basin—one of the world's largest single oilfields—which started production in 1994. Under the policy of transporting western natural gas and oil eastwards, the Tarim oil and gas fields are now being connected with a 6,000 km-long pipeline to the eastern coast of the

PRC with an estimated investment of almost $14 billon, most of which is FDI. Foreign investment in the oil and gas sector was permitted in 1993 and has seen a substantial inflow of FDI since then. The province also produced 27 million tons of coal and 23.5 billion kilowatt-hours of electricity in 2003. The industrial structure has become quite diversified over time with production of steel, cement, chemical fertilizers, sugar, and cotton yarn. The hydrocarbon reserves and the government's policy of turning XUAR into the country's largest petrochemical base have spurred growth in related industries since the mid-1990s.

3. Infrastructure is well developed, with 3,361 km of railway lines connecting XUAR with the rest of the PRC; Almaty, Kazakhstan; and Russia. The province reportedly has a road network of 80,900 km, but only 428 km of that is expressway. The highway running across the Taklimakan Desert is a graded highway. XUAR has 11 airports, with its capital Urumqi connected to Almaty, Tashkent, Moscow, Islamabad, and 64 major cities in the PRC including Beijing and Shanghai. The telecommunications network is well developed, with a digital network connecting Urumqi with all other parts of the PRC and an optical fiber linked to Xian and other western cities. A mobile phone network is also in place. It had about 2.9 million users in 2001.

4. Merchandise exports have grown from $549.8 million in 1996 to $2.5 billion in 2003. Export expansion has been partly driven by manufactured exports which accounted for $2.2 billion in 2003 (up from $385 million in 1996). The bulk of XUAR's manufactured exports are destined for the Central Asia republics and Russia. Hence, XUAR acts as gateway in the PRC's trade relations with Central Asia. Tourism also contributes nearly $100 million annually to foreign exchange earnings.

Figure A6.3: Export Performance (US$ million), 1996–2003



5. Economic development in the XUAR of the PRC has benefited from resource transfer from the central budget. During 1995–2000, public investment amounted to more than 53% of total investment of more than CNY500 billion. Since 1996, XUAR received large fiscal subsidies from the central budget under the government's strategy to develop the western provinces. Subsidies increased from CNY5.9 billion in 1996 to CNY18.4 billion in 2001. The World Bank has financed 22 projects with loans of about CNY41.8 billion and ADB has financed three

investment projects with a total commitment of $5 million. Other foreign bilateral financial assistance has amounted to 5.41 million Yuan in 68 projects.

C. Social Development

6. Illiteracy was below 2% among the young and middle-aged in 2003. A system of compulsory education for the first 9 years is enforced, ensuring almost universal access to elementary education. The number of schools has increased steadily and now the province has 26 institutions of higher learning with an enrollment of more than 100,000. Health facilities have expanded steadily but actual health indicators are not available. In 2003, the province had 1,471 hospitals offering 36.1 hospital beds per 10,000 people as compared to 1.6 in 1949. A three-tier health system at the county, township, and village levels has been put in place with the number of doctors and medical workers above the national average. The coverage of pregnant and lying-in women under systematic health care has reached 90% in urban and 50% in rural areas. Seventy percent of children in urban areas and 30% in rural areas are covered under organized health schemes. Almost half the population (8.1 million) has access to piped drinking water.

TRANSITION INDICATORS, 2004

The EBRD has computed indicators that reflect the pace of industrial reforms in the CARs. These transition indices range a 1 to 4+, with 1 representing little or no change from a rigidly planed economy and 4+ representing the standards of an industrial market economy. These indicators are reported in the Table below[1]

Table A7.1: Transition Indicator Scores 2004

	Enterprises			Markets and Trade			Financial Institutions		Infrastructure
	Large-scale privatization	Small-scale privatization	Governance & enterprise restructuring	Price liberalisation	Trade & foreign exchange system	Competition policy	Banking reform & interest rate liberalisation	Securities markets & non-bank financial institutions	Infrastructure reform
Oil Exporters									
Azerbaijan	2	4-	2+	4	4-	2	2+	2-	2
Kazakhstan	3	4	2	4	3+	2	3	2+	2+
Turkmenistan	1	2	1	3-	1	1	1	1	1
Non-oil Exporters									
Kyrgyz Republic	4-▲▲	4	2	4+	4+	2	2+	2	2-▲
Tajikistan	2+	4-	2-	4-	3+	2-	2▲	1	1+
Uzbekistan	3-	3	2-	3-	2-	2-	2-	2	2-
Memo Items									
Russia	3+	4	2+	4	3+	2+	2	3-	3-▲
Hungary	4	4+	3+	4+	4+	3	4	4-	4-
Slovenia	3	4+	3	4	4+	3-	3+	3-	3

Note: The transition indicators range from 1 to 4+, with 1 representing little or nor change from a rigid centrally planned economy and 4+ representing the standards of an industrliased market economy. For a detailed breakdown of each of the areas of reform, see the methodological notes on page 199.
Source: EBRD.

[1] For a detailed breakdown of each of the areas of reform, see European Bank for Reconstruction and Development (2004) methodological notes on page 199–200.